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Part I

Diseases and Conditions Proposed for Notification

AIDS (INCLUDING CD4+ TEST RESULTS)
Supporting Information to Justify Notification

Incidence: In 1993, 997 cases were diagnosed for an annual incidence of 19 per 100,000; in 1998, 426 cases were diagnosed and reported (annual incidence of 7.5 per 100,000). Declining incidence is likely due to widespread antiretroviral (ARV) therapy and prophylactic treatment for opportunistic infections and is probably not a true reflection of underlying HIV incidence. The national rate for 1998 was 17.2 per 100,000

Morbidity: The number of persons living with a diagnosis of AIDS is currently estimated at 3,513.

Mortality/case fatality rate: Uncertain. Prior to the advent of ARV, the case fatality rate approached 100%. ARV has been shown to retard the progression of AIDS to death, but the longevity of its therapeutic effects is unknown. The use of antiretrovirals has markedly increased the survival rate of AIDS patients diagnosed since 1995. Of the 426 cases reported in Washington, 1998, 30 were known to have died as of March 1, 1998. National mortality for 1998 from AIDS was 16,516, which marks a decrease of 46.9% from 1997.

Communicability and potential for outbreaks (or impact on others): Exposure to HIV, apart from fetal exposure, occurs only among those undertaking high-risk behaviors. HIV outbreaks depend on high frequency of risk behavior(s) with different people in association with a high prevalence of new infections in needle-sharing or sexual partners, since HIV is most easily transmitted within weeks after infection.

Preventability and treatability: Prior to ARV therapy, progression of HIV infection to AIDS (and death) was inevitable in most cases; however, the long term effectiveness of ARV is unknown. Moreover, these drugs are not effective or tolerated in all individuals, and their high cost renders them inaccessible to many HIV-infected persons who lack means of payment.

Necessity for immediate public health response: None

CSTE/CDC recommendation for reporting: Yes (both)

WHO interest: Yes, though magnitude of epidemic is far greater in developing countries.

Agricultural impact: None

Public concern about condition (now and historically): High visibility. HIV infection and AIDS are lightning rods for multiple, related issues, often politically sensitive and polarizing, about sexual behavior and education, illegal drug use, confidentiality of medical information, differential access to health care, and individual civil liberties.

Other potential sources of data about the condition: None which is population-based or assuredly representative of all AIDS cases. Special studies (e.g., Adult Spectrum of Disease [ASD]) are informative but have limited generalizability. Data on AIDS-related hospitalizations are available through the Comprehensive Hospital Abstract Reporting System (CHARS); however, these do not provide detailed information on mode of transmission, residence and age at diagnosis, or other information necessary for monitoring trends.

Emergent condition: No

Public health action: In conjunction with HIV reporting, will allow determination of who is at risk for HIV infection but not receiving timely HIV testing and/or care. This information will allow targeted promotion of HIV counseling and testing and referral to care among individuals whose infections might

otherwise not be recognized and/or treated. AIDS case reporting will also help monitor the use of health care resources and help communities plan for necessary medical and social support services.

Clinical description: CDC has expanded the acquired immunodeficiency syndrome (AIDS) surveillance Clinical description to include all human immunodeficiency virus (HIV)-infected adolescents and adults aged greater than or equal to 13 years who have either a) less than 200 CD4+ T-lymphocytes/uL; b) a CD4+ T-lymphocyte percentage of total lymphocytes of less than 14%; or c) any of the following three Clinical conditions: pulmonary tuberculosis, recurrent pneumonia, or invasive cervical cancer. The expanded definition retains the 23 Clinical conditions in the AIDS surveillance Clinical description published in 1987. (See CDC. 1993 Revised classification system for HIV infection and expanded surveillance Clinical description for AIDS among adolescents and adults. *MMWR* 1992;41(No. RR-17) for complete information referring to this Clinical description.)
The AIDS surveillance Clinical description for children aged less than 13 years has not changed and retains the Clinical conditions listed in the AIDS surveillance Clinical description published in 1987. However, definitions for HIV encephalopathy, HIV wasting syndrome, and HIV infection in children have been revised and the 1987 definition has been updated. (See CDC. 1994 Revised classification system for human immunodeficiency virus infection in children less than 13 years of age. *MMWR* 1994;43(No. RR-12) for complete information pertaining to this Clinical description.)

Laboratory criteria for diagnosis: CDC. 1993 Revised classification system for HIV infection and expanded surveillance Clinical description for AIDS among adolescents and adults. *MMWR* 1992;41(No. RR-17)

Case classification: CDC has revised the classification system for HIV infection to emphasize the Clinical importance of the CD4+ T-lymphocyte count in the categorization of HIV-related Clinical conditions. This classification system replaces the system published by CDC in 1986. (See CDC. 1993 Revised classification system for HIV infection and expanded surveillance Clinical description for AIDS among adolescents and adults. *MMWR* 1992;41(No. RR-17) for complete information pertaining to this Clinical description.)

ANIMAL BITES

Supporting Information to Justify Notification

Incidence: No statewide data are available on incidence; hospitalizations for animal bites for the SEVEN year period from 1989-1996 include 652 dog bites, 10 rat bites, and 694 bites from nonvenomous snakes, lizards and other animals. In 1994 an estimated 4.7 million persons in United States (1.8% of population) sustained a dog bite. Numbers, rates of bites involving other animals unknown.

Morbidity: Statewide unknown. 1994 (United States) 800,000 persons (0.3% of population) sought medical attention.

Mortality/case fatality rate: 8 reported deaths in Washington in 1979-1996 due to dog bites. 279 deaths in United States from 1979-1994. 80% of deaths in 1993-96 were in children 0-11 years old.

Communicability and potential for outbreaks (or impact on others): Potential for rabies exposure, trauma, several other uncommon infectious diseases.

Preventability and treatability: Animal owner and public education(especially aimed at parents, children), community animal control measures.

Necessity for immediate public health response: Evaluation of potential rabies exposure. Depends on animal species, bite circumstances, animal quarantine, animal rabies test results

CSTE/CDC recommendation for reporting: No

WHO interest: Rabies cases only, not for animal bites.

Agricultural impact: Dog attacks on livestock.

Public concern about condition (now and historically): High level of public concern, awareness in 1997 because of human rabies cases and bats in Governor's Mansion. Historically always high.

Other potential sources of data about the condition:
Veterinarians, Dept. of Agriculture, Humane Society, law enforcement agencies, CHARS data, health care providers

Emergent condition:
Animal bites - No, Human rabies due to exposure via bite from rabid bats - Yes

Public health action:
Evaluate all animal bites for potential of rabies exposure, review tetanus vaccination status quarantine animals, test animals for rabies. Recommend rabies postexposure prophylaxis for exposed persons.

Clinical description: Any bite that breaks the skin.

ASTHMA, OCCUPATIONAL

Supporting Information to Justify Notification

Incidence/Morbidity: Occupational asthma is the most frequently diagnosed occupational lung disease in industrialized countries. It often involves hospitalizations and can be severely disabling and even fatal for affected individuals. Recent epidemiologic studies indicate international rates of asthma incidence, prevalence, morbidity and mortality are increasing. The incidence of asthma in adults has been estimated between 0.5-2.5/1000 per year. As many as 28% of these cases may be attributable to work place exposures. Estimates of morbidity for asthma in the adult population range from 3-10 percent. As many as 26% of these cases may be occupationally related.

In 1996 there were 176 workers' compensation claims filed for asthma. Approximately one quarter of these claims were associated with time loss (4 or more days off work) and close to 40% were associated with medical bills only. We suspect that these data greatly underestimate the true magnitude of the problem in Washington State.

In 1997, the Department of Labor and Industries undertook a survey of Washington State Physicians who were members of the Washington American Lung Association, the American College of Chest Physicians, the American College of Environmental and Occupational Medicine. Eighty one physicians (out of 117 respondents) reported that they had newly diagnosed 318 cases of occupational asthma in the past year and 86 providers reported that they were currently treating approximately 732 patients with occupational asthma. Fifty one physicians reported seeing 373 new cases of Reactive Airways Dysfunction Syndrome ("RADS") within the past year and 57 respondents reported that they were currently treating about 400 cases of RADS.

Mortality: In general, the case fatality rate for asthma is 3-6%. Deaths due to occupational asthma are unknown. In June of this year, an occupational fatality related to an asthmatic reaction was reported to the Department of Labor and Industries.

Communicability and Potential for Outbreaks: It is not uncommon for clusters of cases to be identified in workplaces where exposures to sensitizers and known asthmagens occur.

Preventability: Occupational asthma is preventable. The identification of causal agents through case and worksite follow-up can lead to interventions which eliminate or reduce exposures. Studies have shown that early diagnosis and removal from exposure significantly reduces the severity and duration of the disease, and may even result in resolution of the disease.

Necessity for Immediate Public Health Response: Clusters of asthma and RADS occurring in the workplace need to be investigated immediately because they may indicate over-exposure and a needed change in work practices/conditions. It is also possible that the cases could be related to a new "asthmagen" or sensitizing agent. Because new chemicals are being introduced into the workforce everyday it is important to identify those chemicals that are associated with disease as quickly as possible. This obviously assists in the prevention of future disease and may have policy implications, as well.

CSTE/CDC: The condition is on the CSTE list. Because of the severity of this disease and the fact that a significant proportion of adult onset asthma is suspected to be of occupational etiology, occupational asthma remains one of NIOSH's top research priorities.

WHO Interest: No.

Agriculture: No.

Public Perception of Risk: Moderate and increasing as public awareness increases.

Other Sources: The other sources of data (Workers' Compensation System, United States Bureau of Labor Statistics, National Health Interview Survey) are believed to greatly underestimate the magnitude of the problem. They are less useful in terms of linking exposures to disease than a surveillance system with provider reporting. The other states conducting asthma surveillance rely primarily on physician reporting for case ascertainment.

Emergent Conditions: Occupational asthma is not a new condition. But recent epidemiologic studies indicate international rates of asthma incidence, prevalence, morbidity and mortality are increasing.

Public health action: The overall goal of collecting this information is to identify exposures (i.e., etiologic agents) associated with increased risk of occupational asthma. Incident cases will be contacted and worksite evaluation (with possible intervention) will be undertaken. Data on incident cases will be collected, analyzed and results will be disseminated to reduce the incidence of occupational asthma. This knowledge will be applied locally in Washington state and will be shared on a national level as well. More specifically, we plan to focus initial networking on pulmonary and occupational physicians. We will develop and distribute educational materials for internists and for reporting providers. We plan to conduct worker/workplace follow-up for potential clusters. When possible, these follow-ups will include exposure assessment. Quarterly or semi-annual newsletters will be distributed to providers, industry and labor stakeholders. We will maintain regular communication with other states conducting asthma surveillance to share knowledge and experience. New suspect etiologic agents that are identified will be discussed with researchers conducting asthma surveillance in other states (California, Michigan and Massachusetts) and with asthma specialists in the United States and British Columbia (Susan Kennedy and Moira Chan-Yeung). If consistent evidence is found, these agents will be investigated by the

occupational health community and will be written up in hazard alerts and/or in professional journals. Policy implications will also be evaluated.

Is there a statute that requires reporting of the data? If so please specify. There is no law specifically requiring the reporting of asthma. However, occupational diseases, are covered more generally. The requirement for mandatory reporting to the Department of Labor and Industries (L&I) is part of workers' compensation law, and is found in Title 51 (Revised Code of Washington 51.28.020, as interpreted in Washington Administrative Code 296025-025). The physician is required to file the "Report of Industrial Injury or Occupational Disease" with the L&I using the specified form for all employees covered by the State Fund. Failure to do so can result in a fine. For employees covered by a self-insured employer, the information is filed with the administrator of the self-insured's claims, who is in turn responsible for filing this with Labor and Industries. This is the basis of the data from the Workers' Compensation system.

Clinical description: The occupational asthma surveillance Clinical description requires a health-care professional's diagnosis of asthma (or a related diagnosis consistent with asthma) and an association between symptoms of asthma and work. Cases meeting these criteria are considered occupational asthma for surveillance purposes.

Laboratory criteria for diagnosis: None.

Case Classification: Occupational asthma cases are classified to distinguish between work-related exacerbations of a preexisting asthma condition (work-aggravated asthma) and asthma induced by workplace exposures (new-onset asthma). Workers with a history of symptomatic or treated asthma within 2 years of entering a new occupational exposure setting and who experience an increase in symptoms or an increase in the use of asthma medication upon entering the new work setting are classified as having work-aggravated asthma. Workers with no history of asthma or who had preexisting asthma (e.g., childhood asthma) that had been asymptomatic for at least 2 years before entering the workplace where asthma was diagnosed are considered to have new-onset asthma. The occupational asthma classification system distinguishes between two types of new-onset asthma -- reactive airways dysfunction syndrome (RADS) (i.e., persistent asthma symptoms induced by a one-time, high-level irritant exposure at work) and occupational asthma (e.g., classic sensitizer-induced asthma and irritant-induced asthma not meeting the RADS criterion). Occupational asthma is further subclassified according to whether the suspected agent is a known asthma inducer (i.e., an agent previously documented in the medical literature to cause occupational asthma) and whether any objective physiologic testing has been done to substantiate asthma work-relatedness. To facilitate consistency in agent coding across the participating states, putative causes of WRA are coded by using the Association of Occupational and Environmental Clinics' (AOEC) hierarchical exposure coding scheme. To promote consistency in subclassifying cases of occupational asthma, agents known to induce occupational asthma have been flagged in the AOEC scheme with the letter "A."

BIOTERRORISTIC AGENTS - ANTHRAX (Bacillus anthracis)

Supporting Information to Justify Notification

Incidence: Last reported Washington case was in 1957. The last reported human case of anthrax in the United States occurred in 1992.

Morbidity: Acute bacterial disease which occurs in several forms - cutaneous, inhalation and intestinal. Cutaneous form can spread to lymph nodes and cause overwhelming septicemia. Inhalation form is mild but may progress to severe respiratory distress, shock and death. Rare Intestinal form causes intestinal distress, fever, septicemia and death.

Mortality/case fatality rate: In untreated cutaneous form 5-20% of cases are fatal. Inhalation form is treatable with antibiotics early in the course but is near 100% fatal if treatment starts late.

Communicability and potential for outbreaks (or impact on others): Animal reservoir, mainly livestock and wild herbivores who shed the bacteria in hemorrhages at death. Bacterial spores remain viable for years in soil. Humans and carnivores are incidental hosts. Humans exposuremay result from handling tissues of animals dying of the disease, bites of flies feeding on dying animals, contact with hair, wool, or hides, contact with soil, inhalation of aerosols, or ingestion of contaminated meat. Infrequent infection in most industrialized countries. Person-person transmission very rare. An outbreak occurred linked to a laboratory accident in former Soviet Union (Sverdlovsk).

Preventability and treatability: Immunize high risk persons, preventive measures for veterinarians and persons who work with animal products. Treatable with antibiotics if early in disease course.

Necessity for immediate public health response: Search for history of animal exposure or exposure to animal products and trace to place of origin. Investigation of contacts to find additional cases. Epidemiologic investigation of suspected bioterroristic event. Follow guidelines for patient isolation and disinfection, and chemoprophylaxis of exposed persons.

CSTE/CDC recommendation for reporting: Reportable to CDC and CSTE recommended.

WHO interest: Class 2A

Agricultural impact: Livestock illness, deaths, immunization and treatment costs. Economic impact if livestock in state were source of infection.

Public concern about condition (now and historically): Historically low in Washington. Higher with news of possible stockpiles in Iraq.

Other potential sources of data about the condition: Animal cases - Department of Agriculture, veterinarians, veterinary college, laboratories.

Emergent condition: No.

Public health action: Immediate response is necessary. See above.

Clinical description: An illness with acute onset characterized by several distinct Clinical forms including:

- Cutaneous (a skin lesion evolving over 2 to 6 days from a papule, through a vesicular stage, to a depressed black eschar)
- Inhalation (a brief prodrome resembling a viral respiratory illness followed by development of hypoxia and dyspnea, with x-ray evidence of mediastinal widening)
- Intestinal (severe abdominal distress followed by fever and signs of septicemia)
- Oropharyngeal (mucosal lesion in the oral cavity or oropharynx, cervical adenopathy and edema, and fever)

Laboratory criteria for diagnosis:

- Isolation of *Bacillus anthracis* from a Clinical specimen, or

- Fourfold or greater rise in either the anthrax enzyme-linked immunosorbent assay (ELISA) or electrophoretic immunotransblot (EITB) titer between acute- and convalescent-phase serum specimens obtained greater than or equal to 2 weeks apart, or
- Anthrax ELISA titer greater than or equal to 64 or an EITB reaction to the protective antigen and/or lethal factor bands in one or more serum samples obtained after onset of symptoms, or
- Demonstration of *B. anthracis* in a Clinical specimen by immunofluorescence.

Case classification: Confirmed: a clinically compatible illness that is laboratory confirmed.

BIOTERRORISTIC AGENTS – SMALLPOX (Variola virus)

Supporting Information to Justify Notification

Incidence: There has not been a naturally occurring case of smallpox since 1977 following a global eradication effort by the World Health Organization.

Morbidity: Blindness has occurred in as many as 30% of survivors due to corneal infection and neurological damage has been documented.

Mortality/case fatality rate: 30% and potentially higher in immunocompromised populations.

Communicability and potential for outbreaks (or impact on others): The deliberate reintroduction of smallpox is regarded as a possibility. Variola virus is a highly contagious organism, which has considerable stability in an aerosol form and a low infectious dose. Smallpox can easily be transmitted from person to person or through an aerosolization device. During the 1960's and 70's when smallpox was imported into Europe as many as 10 to 20 secondary cases resulted from a single case.

Preventability and treatability: Presently smallpox vaccine is only available in very limited quantities and no laboratories are currently approved by the FDA to produce it. There is no treatment available for persons with smallpox; however, vaccination within 4 days of exposure may prevent or lessen disease.

Necessity for immediate public health response: Since smallpox is a highly contagious disease (transmitted by aerosol or contact from person to person) even one case of smallpox would represent a Public Health Emergency requiring immediate isolation and quarantine implementation.

CSTE/CDC recommendation for reporting: Smallpox is not formally a Nationally Notifiable Disease under the current regulations; however, CDC recommends immediate reporting to state health officials if smallpox is suspected.

WHO interest: In 1980 the WHO recommended all counties cease vaccination and that all laboratories destroy their stocks of variola virus or transfer them to 1 of 2 WHO reference laboratories (Institute of Virus Preparations in Moscow, Russia or Centers for Disease Control and Prevention in Atlanta, GA). The WHO has recommended the destruction of these virus stocks; however, due to concerns about the integrity of the repositories these stocks have not been destroyed. Therefore WHO interest is very high they would recommend immediate reporting of any suspect cases.

Agricultural impact: Humans are the only known reservoir for variola virus

Public concern about condition (now and historically): Allegations from a former deputy director of the Soviet Union's Bio-weapons program have heightened concerns that smallpox might be used as a bio-weapon. Furthermore due to the breakdown of the former Soviet Union financial support for laboratories in Russia has sharply declined increasing concerns that smallpox virus may not only be located in the 2 designated repositories.

Other potential sources of data about the condition: D.A. Henderson. Bioterrorism as a Public Health Threat. Emerging Infectious Diseases, 1998 - http://www.cdc.gov/ncidod/EID/vol4no3/hendrsn.htm; D.A. Henderson. Smallpox: Clinical and Epidemiologic Features. Emerging Infectious Diseases, 1999 - http://www.cdc.gov/ncidod/EID/vol5no4/henderson.htm ; APIC/CDC Bioterrorism Readiness Plan: A Template for Healthcare Facilities - http://www.cdc.gov/ncidod/hip/Bio/13apr99APIC-CDCBioterrorism.PDF

Emergent condition: Since this disease was eradicated in 1977 and vaccination in the US was discontinued in the early 1970's one case of smallpox could lead to massive morbidity and mortality in our highly susceptible population.

Public health action: In order to contain an outbreak of smallpox immediate identification and subsequent isolation and vaccination (if available) of all potentially exposed persons and health care workers. If vaccine is not available isolation and quarantine of all potentially exposed persons would be necessary.

Case definition:

Laboratory diagnosis: Testing can only be performed in a Biosafety Level 4 laboratory (CDC or USAMRIID).

Case classification:

BIRTH DEFECTS MONITORING PROGRAM

Supporting Information to Justify Notification

Incidence: Approximately 3 in every 100 children is born with a birth defect whose nature is considered major, disabling, or which has an impact on the course of the child's life. Due to advances in medicine children born with major birth defects have a much greater rate of survival than ever before. See individual birth defects listed below: Anencephaly, Cerebral Palsy, Cleft Lip (with or without cleft palate), Cleft Palate, Down Syndrome, Fetal Alcohol Syndrome, Gastroschisis, Hypospadias, Limb Reductions, Omphalocele, and Spina Bifida.

Morbidity: Children born with birth defects who do survive, tend to have life-long disability, which necessitates extra medical, educational, or other services.

Mortality/Case-Fatality Rate: Fatality rates vary by type of defect. Anencephaly or hypoplastic left heart are 100% fatal. Other serious heart defects are on average 30% fatal.

Communicability and Potential for Outbreaks: Birth defects are not a communicable disease. However, there is a potential for cluster outbreaks which could be attributable to certain environmental exposures.

Preventability and Treatability: Though only 20% of all birth defects have known environmental causes (those that are not associated with genetics and as such are modifiable), the use of folic acid by women of childbearing age reduces the risk of Neural Tube Defects (NTDs) and clefting; and avoidance of alcohol, tobacco and other drugs during pregnancy prevents all cases of Fetal Alcohol Syndrome/Fetal Alcohol Effects (FAS/FAE), and other drug related defects. Maternal obesity, which could be affected through education and treatment before pregnancy, has been implicated as a cause of abdominal wall defects in children. Surgical treatment is appropriate for many structural birth defects. Functional defects can be amenable to therapy interventions which prevent or lessen secondary disability.

Necessity for Immediate Public Heath Response: The public health response should be to improve the health and well-being of individuals with birth defects through identification and early intervention activities that can lessen the long-term impacts and improve health status.

CSTE/CDC Recommendation: Reporting of birth defects is strongly encouraged by CDC.

WHO Interest: The World Health Organization list includes communicable diseases.

Agricultural Impact: The agricultural community is concerned with exposure to pesticides and herbicides among farm workers. There have been questions raised about increased incidence of birth defects and pregnancy losses in the farm laborer population.

Public Concern about Condition (Now and Historically): Birth defects with no known modifiable cause, which is about 80% of all cases, are frequently suspected to be caused by environmental factors. The concern during the 1970's about environmental hazards led to the birth defects monitoring legislation. Interest waxes and wanes based on public information about new or newly discovered exposure hazards.

Other Potential Sources of Data about the Condition: The assessment process will evaluate the use of other data, as well as procedure changes in the current surveillance system. A course of action will be decided next year based on the recommendations of both internal DOH personnel and external stakeholders.

Emergent Conditions: Birth defects are neither new nor likely to increase dramatically. Since only 20% of all birth defects have a known modifiable cause, surveillance could provide information for researchers and ultimately lead to prevention strategies for some of the 80% which are unknown.

Actions to be taken by Public Health using the Data: By law DOH is to "assure that information is prepared and periodically updated" on birth defects and public and private services for disabled individuals with birth defects. An assessment process currently underway will define further uses of the data, including public health's role.

BIRTH DEFECTS - (ANENCEPHALY)

Supporting Information to Justify Notification

Incidence/Prevalence: Washington State data indicate that approximately 0.8/10,000 births are anencephalic. Nationally, the incidence has been reported at 1.5/10,000. Both Washington State and National rates may actually be higher due to the difficulty in identifying cases prenatally diagnosed and subsequently terminated.

Morbidity: This condition is incompatible with life.

Mortality/case fatality rate: The mortality rate is 100%.

Communicability and potential for outbreaks (or impact on others): The condition is not communicable. However, because neural tube defects have a multifactorial etiology, there is a potential for cluster outbreaks. Clusters of anencphaly have been reported in other states and have been hypothesized to be related to environmental exposures.

Preventability and treatability: Approximately 50% of neural tube defects may be preventable with folic acid supplementation. Prenatally, expanded alpha fetoprotein screening can detect about 97% of anencephaly which can facilitate delivery or early termination of pregnancy. Anencephaly is not treatable.

Necessity for immediate public health response: With the exception of cluster investigation, an immediate public health response is not required.

CSTE recommendation for reporting: Reporting of birth defects is strongly encouraged by CDC. Anencephaly is one of the 22 malformations reported by the International Clearinghouse of Birth Defects.

WHO Class 1: The World Health Organization list includes only communicable diseases.

Agricultural impact: The agriculture community is concerned with exposure to pesticides and herbicides among farm workers. There have been questions raised about increased incidence of birth defects including neural tube defects and pregnancy losses in the farm laborer population. Concern regarding birth defects to women environmentally exposed to pesticides has also been expressed.

Public concern about condition (now and historically): Birth defects with no known modifiable cause, are frequently suspected to be caused by environmental factors. The concern during the 1970's about environmental hazards led to the birth defects monitoring legislation. Recently, the National Birth Defects Prevention Act was passed, in response to public concern over incidence of neural tube defects, among others. Interest waxes and wanes based on public information about new or newly discovered exposure hazards, reported clusters, and potential prevention.

Emergent condition: Anencephaly is not a new or emerging condition, but as stated for **Public concern** above, awareness will be increasing due to potential preventability.

Public health action: Monitor trends, educate consumers and policy makers, evaluate prevention activities, assess populations at risk, and disseminate data for research.

Clinical description: *All fetal deaths, elective terminations, or stillbirths from 20 weeks, diagnosed with anencephaly, to women residing in Washington at the time of delivery; and live births up to 1 year of age, diagnosed with anencephaly, residing in Washington at the time of diagnosis.*

Laboratory criteria for diagnosis:

BIRTH DEFECTS – (AUTISM)

Supporting Information to Justify Notification

Incidence/Prevalence:
Nationally, the prevalence of autism has been reported at 2-10/10,000 per population.

Morbidity:
Morbidity associated with autism varies. Autism is often associated with seizure disorders, mental retardation, and other developmental delays.

Mortality/case fatality rate:
Mortality varies depending on the severity of the condition, and the existence of co-morbidities. In the absence of co-morbidities, longevity may not be significantly affected.

Communicability and potential for outbreaks:
This condition is not communicable.

Preventability and treatability:
At present, prevention strategies for autism are unknown. Treatment includes educational and behavioral interventions, and medical treatment, most notably medication for related symptoms. There is no known cure for autism.

Necessity for immediate public health response:
With the exception of cluster investigation, an immediate public health response is not often required in relationship to birth defects. However, public health can promote prevention efforts by monitoring trends, educating consumers and policy makers, evaluating prevention and treatment activities, assessing populations at risk, and disseminating data for research.

CSTE recommendation for reporting:
Reporting of birth defects is strongly encouraged by CDC.

WHO Class 1:
The World Health Organization list includes only communicable diseases.

Agricultural impact:
Autism has no known association with any agricultural impact.

Public concern about condition (now and historically):
The concern during the 1970's about environmental hazards led to the birth defects monitoring legislation. Autism has no known modifiable cause, but several genes as well as environmental factors are suspected to contribute to the disorder. There is growing concern over the perceived increase in the incidence of autism.

Emergent condition:
While autism is not a new condition, health care providers, educators and school nursing staff report the incidence is greatly increasing. Surveillance would enable us to determine both the incidence of autism in Washington, whether the incidence is increasing, and populations at risk for autism.

Public health action:
Monitoring of trends, education of consumers and policy makers, evaluation of prevention and treatment activities, assessment of populations at risk, dissemination of data for research and services planning, especially for early intervention and education systems.

Clinical description:
Live births up to 10 years of age, diagnosed with Autism, residing in Washington at the time of diagnosis.

BIRTH DEFECTS - (CEREBRAL PALSY)

Supporting Information to Justify Notification

Incidence/Prevalence: Cerebral Palsy occurs in approximately 18.6/10,000 births.

Morbidity: Cerebral palsy encompasses a group of conditions that involve impairments in movement caused by damage to motor areas of the brain prenatally or in early life. It can take many forms and the morbidity and disability associated with the condition can vary tremendously. About one-third of children with cerebral palsy have moderate to severe intellectual impairment, and as many as one-half may have seizures. Vision and hearing impairments are also more common among children with cerebral palsy. Some children may require intense medical procedures, others may require few medical interventions. Most will require additional educational and other services.

Mortality/case fatality rate: High mortality is associated with Cerebral Palsy.

Communicability and potential for outbreaks (or impact on others): This condition is not communicable.

Preventability and treatability: Treatment may include surgical interventions, physical or occupational therapy, drug therapy, or other medical treatment. Depending upon severity, and co-morbidities, special educational services may be required. Research has identified several causes of cerebral palsy including maternal infections, neonatal jaundice, Rh incompatibility, and in utero stroke. In addition, several risk factors have been identified including breech presentation, complicated deliveries, birth defects, low birth weight, premature delivery, maternal hyperthyroidism, and maternal bleeding. Preventability may be linked to efforts to reduce these risk factors where possible.

Necessity for immediate public health response: No immediate public health response is necessary.

CSTE recommendation for reporting: Reporting of birth defects is strongly encouraged by CDC.

WHO Class 1: The World Health Organization list includes only communicable diseases.

Agricultural impact: None.

Public concern about condition (now and historically): Interest waxes and wanes based on public information about new or newly discovered exposure hazards, and reported clusters.

Emergent condition: As survivability of low birth weight and pre-term infants increases, the prevalence of cerebral palsy may increase as well.

Public health action: Monitor trends, educate consumers and policy makers, evaluate treatment activities, assess populations at risk, disseminate data for research

Clinical description: *Live births up to 10 years of age, diagnosed with Cerebral Palsy, residing in Washington at the time of diagnosis.*

BIRTH DEFECTS - (CLEFT LIP, WITH OR WITHOUT CLEFT PALATE)

Supporting Information to Justify Notification

Incidence/Prevalence: Washington State data indicate that approximately 12.7/10,000 live births are affected. Nationally, approximately 8.8/10,000 births are affected.

Morbidity: Corrective surgery is required. About 20% of children affected with cleft lip with or without cleft palate have other birth defects. Medical, educational, and other services vary depending on the severity of the condition.

Mortality/case fatality rate: Mortality varies depending on the severity of the condition, and the existence of co-morbidities. In the absence of co-morbidities, longevity may not be significantly affected.

Communicability and potential for outbreaks (or impact on others): This condition is not communicable. However, because cleft lip with or without cleft palate has a multifactorial etiology, there is a potential for cluster outbreaks.. Clusters of cleft lip have been reported in other states, and have been hypothesized to be related to environmental exposures.

Preventability and treatability: Oral clefts have a multifactorial etiology, including both genetic and environmental factors. Among environmental factors, smoking has been shown to increase risks and periconceptional vitamin supplementation to decrease risks. Treatment includes surgical repair and other

medical treatment (e.g., speech therapy, nutrition counseling). Depending upon severity, and co-morbidities, educational and other treatment may be required.

Necessity for immediate public health response: With the exception of cluster investigation, an immediate public health response is not required.

CSTE recommendation for reporting: Reporting of birth defects is strongly encouraged by CDC. Cleft lip is one of the 22 conditions reported by the International Clearinghouse of Birth Defects.

WHO Class 1: The World Health Organization list includes only communicable diseases.

Agricultural impact: The agriculture community is concerned with exposure to pesticides and herbicides among farm workers. There have been questions raised about increased incidence of birth defects, including oral clefts, and pregnancy losses in the farm laborer population, and among women environmentally exposed to pesticides.

Public concern about condition (now and historically): Birth defects with no known modifiable cause, are frequently suspected to be caused by environmental factors. The concern during the 1970's about environmental hazards led to the birth defects monitoring legislation. Recently, the National Birth Defects Prevention Act was passed, in response to public concern over incidence of neural tube defects, among others. Interest waxes and wanes based on public information about new or newly discovered exposure hazards, reported clusters, and potential prevention.

Emergent condition: No.

Public health action: Monitor trends, educate consumers and policy makers, evaluate prevention activities, assess populations at risk, and disseminate data for research

Clinical description: *All fetal deaths, elective terminations, or stillbirths from 20 weeks, diagnosed with cleft lip with or without cleft palate, to women residing in Washington at the time of delivery; or live births up to 1 year of age, diagnosed with cleft lip with or without cleft palate, residing in Washington at the time of diagnosis.*

BIRTH DEFECTS - (CLEFT PALATE)

Supporting Information to Justify Notification

Incidence/Prevalence: Washington data indicate that approximately 6.3/10,000 live births are affected. This is similar to nationally reported rates.

Morbidity: Corrective surgery is required. Cleft palate is often associated with other malformations in a variety of syndromes. Medical, educational, and other services vary depending on the severity of the condition..

Mortality/case fatality rate: Mortality varies depending on the severity of the condition, and the existence of co-morbidities. In the absence of co-morbidities, longevity may not be significantly affected.

Communicability and potential for outbreaks (or impact on others): This condition is not communicable. However, because cleft palate has a multifactorial etiology, there is a potential for cluster outbreaks.

Preventability and treatability: Cleft palates have a multifactorial etiology, including both genetic and environmental factors. Among environmental factors, smoking has been shown to increase risks and

vitamin supplementation to decrease risks. Treatment includes surgical repair and other medical treatment (e.g., speech therapy, nutrition counseling). Depending upon severity, and co-morbidities, educational and other treatment may be required.

Necessity for immediate public health response: With the exception of cluster investigation, an immediate public health response is not often required.

CSTE recommendation for reporting: Reporting of birth defects is strongly encouraged by CDC. Cleft palate is one of the 20 conditions reported by the International Clearinghouse of Birth Defects.

WHO Class 1: The World Health Organization list includes only communicable diseases.

Agricultural impact: The agriculture community is concerned with exposure to pesticides and herbicides among farm workers. There have been questions raised about increased incidence of birth defects, including oral clefts, and pregnancy losses in the farm laborer population, and among women environmentally exposed to pesticides.

Public concern about condition (now and historically): Birth defects with no known modifiable cause, are frequently suspected to be caused by environmental factors. The concern during the 1970's about environmental hazards led to the birth defects monitoring legislation. Recently, the National Birth Defects Prevention Act was passed, in response to public concern over incidence of neural tube defects, among others. Interest waxes and wanes based on public information about new or newly discovered exposure hazards, reported clusters, and potential prevention.

Emergent condition:

Public health action: Monitor trends, educate consumers and policy makers, evaluate prevention activities, assess populations at risk, and disseminate data for research

Clinical description: *All fetal deaths, elective terminations, or stillbirths from 20 weeks, diagnosed with cleft palate, to women residing in Washington at the time of delivery; or live births up to 1 year of age, diagnosed with cleft palate, residing in Washington at the time of diagnosis.*

BIRTH DEFECTS - (DOWN SYNDROME)

Supporting Information to Justify Notification

Incidence/Prevalence: Approximately 10.6/10,000 live births are affected. Both Washington State and National rates may actually be higher due to the difficulty in identifying cases prenatally diagnosed and subsequently terminated.

Morbidity: The chromosomal abnormality Down syndrome results from cells having an extra chromosome 21. This extra genetic material results in a variety of physical manifestations, mental retardation and often associated birth defects, including heart defects. Some associated birth defects require intensive medical procedures, such as surgery,; others have little associated morbidity. Most children will require additional educational and other services. The incidence of leukemia is higher than in the general child population.

Mortality/case fatality rate: Mortality varies depending on the severity of associated birth defects. About 10% of children die before age 1, and longevity is also affected.

Communicability and potential for outbreaks (or impact on others): This condition is not communicable.

Preventability and treatability: Down Syndrome can be diagnosed prenatally by chromosomal analysis and testing is recommended for women over 35. In addition, expanded alpha fetoprotein screening can detect Down syndrome. Treatment may include surgical repair and other medical treatment. Depending upon severity, and co-morbidities, educational and other services may be required. Early intervention for educational purposes enhances the child's learning potential.

Necessity for immediate public health response: There is no need for immediate public health response.

CSTE recommendation for reporting: Reporting of birth defects is strongly encouraged by CDC. Down syndrome is one of the 22 conditions reported by the International Clearinghouse for Birth Defects.

WHO Class 1: The World Health Organization list includes only communicable diseases.

Agricultural impact: Not known to be increased for the population

Public concern about condition (now and historically): The success of both medical and educational early intervention has increased public concern for services and support.

Emergent condition: Possibly higher incidence as the rates of birth to both older birth mothers and older birth fathers increase.

Public health action: Monitor trends, educate consumers and policy makers, evaluate treatment activities, assess populations at risk, and disseminate data for research

Clinical description: *All fetal deaths, elective terminations, or stillbirths from 20 weeks, diagnosed with Down Syndrome, to women residing in Washington at the time of delivery; or live births up to 1 year of age, diagnosed with Down syndrome residing in Washington at the time of diagnosis.*

BIRTH DEFECTS - (FETAL ALCOHOL SYNDROME)

Supporting Information to Justify Notification

Incidence/Prevalence: Current incidence is reported at 1.6/10,000 of live births. However, due to difficulty of diagnosis in some cases until school age, this number likely underestimates the true incidence rate.

Morbidity: Varies depending upon severity of condition. Some individuals may require intense medical procedures, others may require few medical interventions. Most will require additional educational and other services.

Mortality/case fatality rate: Mortality varies depending on the severity of the condition, and the existence of co-morbidities. Mortality is higher than that of the general child population.

Communicability and potential for outbreaks (or impact on others): This condition is not communicable. The known etiology of the condition may make it possible to link certain social and environmental conditions which increase the risk for the occurrence of the condition.

Preventability and treatability: 100% preventable. Treatment may include medical, educational and other service interventions.

Necessity for immediate public health response: No immediate public health response is required.

CSTE recommendation for reporting: Reporting of birth defects is strongly encouraged by CDC.

WHO Class 1: The World Health Organization list includes only communicable diseases.

Agricultural impact: None specific for this condition.

Public concern about condition (now and historically): Public concern and awareness about Fetal Alcohol Syndrome has become heightened due to public awareness campaigns noting the preventability of this condition.

Emergent condition: Increases in Fetal Alcohol Syndrome have been noted. These increases may result in part from increased recognition and diagnosis due to nationally renowned research in the state regarding fetal exposure to alcohol, activities in early diagnosis/detection, educational approaches, and public awareness campaigns.

Public health action: Because of the preventability of this condition, specific health education and prevention efforts, monitoring of trends, the evaluation of prevention and treatment activities, assessment of populations at risk, and dissemination of data for research are all public health actions for which FAS data could be used.

Clinical description: *Live births up to 10 years of age, diagnosed with Fetal Alcohol Syndrome, residing in Washington at the time of diagnosis.*

BIRTH DEFECTS - (GASTROSCHISIS)

Supporting Information to Justify Notification

Incidence/Prevalence: National figures indicate that 2.2/10,000 of live births are affected.

Morbidity: Immediate corrective surgery is required. From 5% to 24% of gastroschisis cases have other birth defects as well. Other medical services vary depending upon the severity of the condition.

Mortality/case fatality rate: About 85% of children with gastroschisis who receive corrective surgery survive, although the mortality for gastroschisis varies depending on the severity of the condition, and the existence of co-morbidities. Overall, mortality is somewhat higher than the general child population.

Communicability and potential for outbreaks (or impact on others): This condition is not communicable. However, gastroschisis has been hypothesized to be due in part to vascular disruption in utero, which may be attributable to certain maternal exposures Clusters of gastroschisis have been reported in Washington and other states.

Preventability and treatability: At the current time gastroschisis is not preventable. Gastroschisis can be prenatally detected through expanded alpha fetoprotein screening. Treatment for affected individuals may include mode of delivery, surgical repair and other medical interventions. Depending upon severity, educational and other services may be required.

Necessity for immediate public health response: With the exception of cluster investigation, an immediate public health response is not required.

CSTE recommendation for reporting: Reporting of birth defects is strongly encouraged by CDC. Gastroschisis is one of the 22 conditions reported by the International Clearinghouse of Birth Defects.

WHO Class 1: The World Health Organization list includes only communicable diseases.

Agricultural impact: The agriculture community is concerned with exposure to pesticides and herbicides among farm workers. There have been questions raised about increased incidence of birth defects and pregnancy losses in the farm laborer population. We are unaware of any scientific literature on gastroschisis in humans related to pesticide exposures.

Public concern about condition (now and historically): Birth defects with no known modifiable cause, are frequently suspected to be caused by environmental factors. The concern during the 1970's about environmental hazards led to the birth defects monitoring legislation. Recently, the National Birth Defects Prevention Act was passed. Interest waxes and wanes based on public information about new or newly discovered exposure hazards, reported clusters, and potential prevention.

Emergent condition: The prevalence of gastroschisis has been increasing over the past two decades. Additionally, the prevalence of gastroschisis is elevated among women under 20, and has been reported in the scientific literature to be associated with maternal drug use.

Public health action: Monitor trends, educate consumers and policy makers, evaluate prevention activities, assess populations at risk, and disseminate data for research

Clinical description: *All fetal deaths, elective terminations, or stillbirths from 20 weeks, diagnosed with gastroschisis, to women residing in Washington at the time of delivery; or live births up to 1 year of age, diagnosed with gastroschisis, residing in Washington at the time of diagnosis.*

BIRTH DEFECTS - (HYPOSPADIAS)

Supporting Information to Justify Notification

Incidence/Prevalence: Hypospadias to the second or third degree, occurs in approximately 5/10,000 live births.

Morbidity: Corrective surgery may be required. Other medical services vary depending upon the severity of the condition, and involvement of other body systems.

Mortality/case fatality rate: Mortality varies depending on the severity of the condition, and the existence of co-morbidities. In the absence of co-morbidities, longevity may not be significantly affected.

Communicability and potential for outbreaks (or impact on others): This condition is not communicable. However, because hyposapadias have a multifactorial etiology, there is a potential for cluster outbreaks.

Preventability and treatability: Hypospadias are not prenatally diagnosable, nor are there known preventive measures. Environmental estrogens have been hypothesized to be associated with hypospadias. Treatment may include surgical repair and other medical treatment..

Necessity for immediate public health response: With the exception of cluster investigation, an immediate public health response is not often required.

CSTE recommendation for reporting: Reporting of birth defects is strongly encouraged by CDC. Hypospadias is one of the 22 conditions reported by the International Clearinghouse of Birth Defects.

WHO Class 1: The World Health Organization list includes only communicable diseases.

Agricultural impact: Unknown

Public concern about condition (now and historically): Birth defects with no known modifiable cause, are frequently suspected to be caused by environmental factors. The concern during the 1970's about environmental hazards led to the birth defects monitoring legislation. Recently, the National Birth Defects Prevention Act was passed, in response to public concern about birth defects. Interest waxes and wanes based on public information about new or newly discovered exposure hazards, reported clusters, and potential prevention. Because of publicized recent increases in this diagnosis, there is heightened public concern for this condition.

Emergent condition: Rates have been increasing over time for all hypospadias, the United States rate has increased from 22.7/10,000 in 1974 to 33.7/10,000 in 1988. [Can we get current data from CDC? for United States]

Public health action: Monitor trends, educate consumers and policy makers, evaluate treatment activities, assess populations at risk, and disseminate data for research

Clinical description: *All fetal deaths, elective terminations, or stillbirths from 20 weeks, diagnosed with hypospadias to the second or third degree, to women residing in Washington at the time of delivery, or live births up to 1 year of age, diagnosed with hypospadias second or third degree, residing in Washington at the time of diagnosis.*

BIRTH DEFECTS - (LIMB REDUCTIONS)

Supporting Information to Justify Notification

Incidence/Prevalence: Approximately 2.2/10,000 births are affected with lower limb reductions. Upper limb reductions have a higher incidence, with 4.4/10,000 births affected.

Morbidity: Varies depending upon severity and type of limb reduction, which can range from missing phalanx of a finger to complete absence of a limb. About 30% of children affected with limb reduction defects have other birth defects as well. Some consequently, have little morbidity, others result in life-long disability.

Mortality/case fatality rate: Mortality varies depending on the severity of the condition, and the existence of other birth defects. About 15% of children affected with limb reduction defects die before age 1, due to a large extent, to associated defects. In the absence of additional defects, longevity may not be significantly affected.

Communicability and potential for outbreaks (or impact on others): This condition is not communicable. However, because limb defects have a multifactorial etiology, there is a potential for cluster outbreaks.

Preventability and treatability: Most limb reduction defects are not detected prenatally, although some can be identified with ultrasound examination. Periconceptional vitamin supplementation has been reported to decrease the risk for limb reduction defects. Vascular disruption in utero, which may result from a variety of mechanisms, has been hypothesized as a cause for some limb reduction defects. After delivery, treatment may include, use of a prosthesis, surgical repair and other related medical treatment, such as physical/occupational therapy.

Necessity for immediate public health response: With the exception of cluster investigation, an immediate public health response is not often required.

CSTE recommendation for reporting: Reporting of birth defects is strongly encouraged by CDC. Limb reduction defects are 1 of the 22 conditions reported by the International Clearinghouse for Birth Defects.

WHO Class 1: The World Health Organization list includes only communicable diseases.

Agricultural impact: The agriculture community is concerned with exposure to pesticides and herbicides among farm workers. There have been questions raised and studies reporting increased incidence of birth defects, including limb reduction defects, and pregnancy losses in the farm laborer population, and among women environmentally exposed to pesticides.

Public concern about condition (now and historically): Limb reduction defects have historically been of concern to the public, primarily as a result of the relationship between Thalidomide and limb defects in the 1950's. Thalidomide was the first widespread example that exposures to women during early pregnancy could induce birth defects. Since that time, birth defects with no known modifiable cause, have been suspected to be caused by maternal exposures, including environmental factors. The concern during the 1970's about environmental hazards led to the birth defects monitoring legislation. Recently, the National Birth Defects Prevention Act was passed, in response to public concern over incidence of neural tube defects, among others. Interest waxes and wanes based on public information about new or newly discovered exposure hazards, reported clusters, and potential prevention.

Emergent condition: No.

Public health action: Monitor trends, educate consumers and policy makers, evaluate prevention activities, assess populations at risk, and disseminate data for research

Clinical description: *All fetal deaths, elective terminations, or stillbirths from 20 weeks, diagnosed with a limb reduction, to women residing in Washington at the time of delivery; or live births up to 1 year of age, diagnosed with a limb reduction, residing in Washington at the time of diagnosis.*

BIRTH DEFECTS - (OMPHALOCELE)

Supporting Information to Justify Notification

Incidence/Prevalence: Approximately 1.7 of every 10,000 live births is affected.

Morbidity: Immediate corrective surgery is required. Omphalocele is often a component of syndromes, including Trisomy 13 and Trisomy 18, and over 75% of affected children have other birth defects. Other medical services vary depending upon the severity of the condition, and co-morbidities.

Mortality/case fatality rate: The mortality for omphalocele varies depending on the severity of the condition, and the existence of co-morbidities, but only about 60% of affected children survive to age 1.

Communicability and potential for outbreaks (or impact on others): This condition is not communicable.

Preventability and treatability: At the current time omphalocele is not preventable. Omphalocele can be detected prenatally through expanded alpha fetoprotein screening. Treatment for affected individuals may include mode of delivery, surgical repair and other medical interventions. Depending upon severity, educational and other services may be required.

Necessity for immediate public health response: With the exception of cluster investigation, an immediate public health response is not required.

CSTE recommendation for reporting: Reporting of birth defects is strongly encouraged by CDC. Omphalocele is one of 22 conditions reported by the International Clearinghouse of Birth Defects.

WHO Class 1: The World Health Organization list includes only communicable diseases.

Agricultural impact: Unknown

Public concern about condition (now and historically): There is little public awareness regarding this condition, however interest waxes and wanes based on public information and potential prevention.

Emergent condition: Omphalocele is not a new or emerging condition.

Public health action: Monitor trends, educate consumers and policy makers, evaluate prevention activities, assess populations at risk, and disseminate data for research

Clinical description: *All fetal deaths, elective terminations, or stillbirths from 20 weeks, diagnosed with omphalocele, to women residing in Washington at the time of delivery; or live births up to 1 year of age, diagnosed with omphalocele, residing in Washington at the time of diagnosis.*

BIRTH DEFECTS - (SPINA BIFIDA)

Supporting Information to Justify Notification

Incidence/Prevalence: Washington state data indicate that approximately 3.7/10,000 of live births have spina bifida. Nationally, 3-5/10,000 live births are affected. Both Washington State and National rates may actually be higher due to the difficulty in identifying cases prenatally diagnosed and subsequently terminated.

Morbidity: This condition is associated with high morbidity. The severity of disability is contingent on the vertebral level of the defect and may range from some lower extremity function to complete paraplegia. In addition, about 20% of children with spina bifida have other major birth defects as well. Necessary medical, educational, and other services vary depending upon the severity of the condition

Mortality/case fatality rate: About 5% of the cases result in death in early childhood. The life expectancy of children with Spina Bifida is dependent upon the severity of the condition, but may be considerably shorter than that of the general child population.

Communicability and potential for outbreaks (or impact on others): This condition is not communicable.. However, because neural tube defects have a multifactorial etiology, there is a potential for cluster outbreaks. Clusters of spina bifida have been reported in other states, and have been hypothesized to be related to environmental exposures.

Preventability and treatability: Approximately 50% of neural tube defects may be preventable with folic acid supplementation. Prenatally, about 80% of spina bifida can be detected through expanded alpha fetoprotein screening. Treatment for affected individuals may include mode of delivery, surgical repair and other medical interventions. Depending upon severity, educational and other services may be required.

Necessity for immediate public health response: With the exception of cluster investigation, an immediate public health response is not required.

CSTE recommendation for reporting: Reporting of birth defects is strongly encouraged by CDC Spina Bifida is one of the 22 malformations reported by the International Clearinghouse of Birth Defects.

WHO Class 1: The World Health Organization list includes only communicable diseases.

Agricultural impact: The agriculture community is concerned with exposure to pesticides and herbicides among farm workers. There have been questions raised about increased incidence of birth defects and pregnancy losses including neural tube defects in the farm laborer population. Concern has also been expressed regarding the occurrence of birth defects in pregnancies of women environmentally exposed to pesticides.

Public concern about condition (now and historically): Birth defects with no known modifiable cause, are frequently suspected to be caused by environmental factors. The concern during the 1970's about environmental hazards led to the birth defects monitoring legislation. Recently, the National Birth Defects Prevention Act was passed, in response to public concern over incidence of neural tube defects, among others. Interest waxes and wanes based on public information about new or newly discovered exposure hazards, reported clusters, and potential prevention.

Emergent condition: Spina Bifida is not a new or emerging condition, but preventability and survivability account for increased awareness.

Public health action: Monitor trends, educate consumers and policy makers, evaluate prevention activities and services, assess populations at risk, and disseminate data for research

Clinical description: All fetal deaths, elective terminations, or stillbirths from 20 weeks, diagnosed with spina bifida, to women residing in Washington at the time of delivery; or live births up to 1 year of age, diagnosed with spina bifida, residing in Washington at the time of diagnosis.

BLOOD LEAD LEVEL

Supporting Information to Justify Notification

Incidence: Between May 15, 1993 and June 30 1997, 443 children with blood lead levels (BLLs) greater than 10µg/dL were reported in Washington State. In the same time period, 674 adults with BLLs greater than 25µg/dL were reported. Since the blood lead registries capture only a fraction of the elevated blood lead cases, the true incidence of elevated blood lead is probably much higher.

Morbidity: Between May 15, 1993 and June 30 1997, 65 children with blood lead levels (BLLs) greater than 20µg/dL and 199 adults with blood lead levels (BLLs) greater than 40µg/dL were reported. At these levels, lead can damage the nervous, blood forming and reproductive systems. Since the registries only capture cases who have had their blood lead level tested, these morbidity figures are an underestimate of the number of cases of elevated blood lead.

Mortality/ Case-Fatality Rate: There has been only one death due to complications of previous lead poisoning in Washington since 1968. The death occurred in 1988 in a 51-year-old female.

Communicability and Potential for Outbreaks: Lead poisoning is non-communicable, although fetuses can be affected from high lead levels in the mother. Since there is a large potential for more than one person to be exposed from the same source (e.g. a lead containing work site), case identification and subsequent investigation is a necessary strategy for preventing the spread of disease.

Preventability and treatment: Effective strategies for preventing childhood lead poisoning are removing sources of lead from the environment, and educational efforts aimed at behavioral change in the absence of environmental remediation. Occupational exposure to lead can be greatly reduced by introducing industrial hygiene measures at the workplace (e.g. engineering controls), as well as by effecting simple changes in worker behavior. Treatment of lead poisoning through chelation, removal/containment of the source and behavioral change is recommended for severe cases of lead poisoning. Behavioral changes and removal/containment of the source of lead exposure are recommended in less severe cases. While treatment can prevent the effects of lead poisoning from becoming worse, some outcomes, such as neurological damage, may be permanent.

Need for Immediate Public Health Response: Public health officials need to act as quickly as possible upon learning of a case of elevated lead, since immediate removal from exposure to lead is necessary in order to prevent further health effects. It is also important to ascertain the source of exposure to prevent additional cases of lead poisoning. For example, workplace follow-up of an occupational exposure case will prevent other lead poisoning cases in that workplace.

CSTE/CDC Recommendation: Reporting of elevated blood lead levels is on the CSTE list and is supported by the CDC. The Centers for Disease Control (CDC) recommends that screening for lead poisoning be included in health care programs for children under 72 months of age, especially those under 36 months of age. For occupational lead exposure, NIOSH manages a nationwide program, ABLES (Adults Blood Lead Epidemiology and Surveillance Program).

WHO Interest: No.

Agriculture: Elevated blood lead is currently not a widespread problem in agriculture. However, the SHARP occupational blood lead registry has received several reports of elevated blood lead levels from individuals working at a fertilizer manufacturing company in Washington State. Also, lead arsenate pesticides were used historically in large quantities in orchards in eastern Washington. Soil contamination by lead may become problematic when housing developments and schools are constructed on these former orchard sites.

Public Concern: The public and the media perceive that exposure to lead poses some risk since there has been widespread press coverage of lead-related issues such as lead in gasoline, drinking water and paint. The possibility and the extent of occupational lead poisoning, however, are not at all well known to the public. The potential severity of the effects of lead in both children and adults is also not widely known. Since brain damage in children can quickly become an emotional issue, if several severe cases were discovered that could have been prevented by quick action, lead poisoning could easily become an issue of greater public concern.

Other Sources: Providers ordering blood lead tests are another potential source of information. However, the CDC, CSTE and ASTHO recommend laboratory reporting as an efficient system to accomplish the goal of lead reporting. There are no other databases that collect information on blood lead levels in Washington State.

Emergent Conditions: Lead poisoning is not newly recognized, although there is increasing recognition that the level at which both children and adults suffer adverse health effects is lower than once thought. Blood lead surveillance can help identify childhood sources of lead exposure, as well as high risk industries and occupations.

Public health action: Elevated blood lead levels for adults (greater than25µg/dL) are followed up as soon as the laboratory report is received. Depending on the blood lead level, follow-up can range from mailing informational material to the individual, to detailed patient interviews, physician contact and extensive workplace follow-up. Between May 15, 1993 and June 30, 1997, information on lead exposure and prevention was mailed to 471 individuals. Workplace follow-up (not necessarily including a site visit) was conducted for 166 individuals. Elevated blood lead levels for children (greater than10µg/dL) are followed up primarily through local health jurisdictions. Depending on the blood lead level, follow-up includes mailing informational material to the parent, parent interviews, physician contact and environmental testing at the home.

Clinical description: See laboratory criteria.

Laboratory criteria for diagnosis: Elevated blood lead levels for adults are those where the lead level is (greater than25µg/dL). For children, under the age of 15, blood level is considered as elevated when (greater than10µg/dL).

BOTULISM (*Clostridium botulinum* including foodborne, infant, and wound)

Supporting Information to Justify Notification

Incidence: There were 2 cases of foodborne botulism, and 4 cases of infant botulism reported in 1998. There were 2 cases of wound botulism reported in 1997. Washington has 0 to 4 cases of food botulism and 0 to 2 cases of wound botulism reported annually. Nationally, there were 168 cases of wound botulism, 22 cases of foodborne botulism, and 65 cases of infant botulism reported in 1998.

Morbidity: Foodborne or wound botulism are severe intoxications characterized by acute cranial nerve impairment and descending weakness or paralysis, potential respiratory failure and death. Infant botulism

is characterized by a baby under a year of age with poor feeding and floppy muscles, progressing to weakness and paralysis. Prolonged hospitalization on a ventilator and months of recovery are sometimes necessary for any form of botulism.

Mortality/case fatality rate: 5-10% foodborne, 1% of hospitalized infant cases.

Communicability and potential for outbreaks (or impact on others): Foodborne botulism cases are usually linked to home-canned vegetables, fruits, or rarely meats which are inadequately heated during canning and not reheated sufficiently before eating. Cases usually occur singly or as small family outbreaks. Rarely, widely distributed commercially prepared foods are occasionally identified as source potentially exposing large numbers of person. Infant –botulism cases are due to ingestion of botulinum spores in foods (honey, corn syrup) and dust. Wound –botulism cases are due to contamination of wounds with soil, gravel, or IV drugs. No person-person transmission occurs.

Preventability and treatability: Process commercially prepared foods effectively. Properly home can food with correct processing techniques, and reheat (boiling) before eating. Treatment with botulinum antitoxin for food or wound botulism or with specific immune globuline for infant botulism. Access to intensive care to prevent respiratory failure and death.

Necessity for immediate public health response: Immediate investigation with one suspect case to identify other possible cases, locate the source of botulism toxin (food or injected drugs such as black tar heroin), collect all suspected foods to prevent additional cases.

CSTE/CDC recommendation for reporting: Reportable to CDC and CSTE recommended.

WHO interest: Class 2A

Agricultural impact: Probably none unless agricultural product recall.

Public concern about condition (now and historically): Historically high, currently moderate.

Other potential sources of data about the condition: Hospital discharge data.

Emergent condition: Yes, botulism has been linked to foods (tomato products) once thought to be too acidic to support bacterial growth. Also wound botulism in IV drug users has emerged as a new problem.

Public health action: See necessity for public health response above. Also educate the public about prevention, home canning techniques, reheating (boiling) before eating.

Botulism, Foodborne Clinical description: Ingestion of botulinum toxin results in an illness of variable severity. Common symptoms are diplopia, blurred vision, and bulbar weakness. Symmetric paralysis may progress rapidly.

Laboratory criteria for diagnosis:

- Detection of botulinum toxin in serum, stool, or patient's food, or
- Isolation of *Clostridium botulinum* from stool

Case classification: Confirmed: a clinically compatible illness that is laboratory confirmed or that occurs among persons who ate the same food as persons with laboratory-confirmed botulism

Comment: Botulism may be diagnosed without laboratory confirmation if the Clinical and epidemiologic evidence is overwhelming.

Botulism, Infant Clinical description: An illness of infants, characterized by constipation, poor feeding, and "failure to thrive" that may be followed by progressive weakness, impaired respiration, and death.

Laboratory criteria for diagnosis:

- Detection of botulinal toxin in stool, or
- Isolation of *Clostridium botulinum* from stool

Case classification: Confirmed: a clinically compatible, laboratory-confirmed illness occurring among children less than 1 year of age

Botulism, Wound Clinical description: An illness resulting from toxin produced by *Clostridium botulinum* that has infected a wound.

Laboratory criteria for diagnosis:

- Detection of botulinal toxin in serum, or
- Isolation of *Clostridium botulinum* from wound

Case classification: Confirmed: a clinically compatible illness that is laboratory confirmed among patients with no suspect food exposure and with a history of a fresh, contaminated wound in the 2 weeks before onset of symptoms

BRUCELLOSIS (Brucella abortus, B. melitensis, B. suis, B. canis)

Supporting Information to Justify Notification

Incidence: There were 12 reported cases in Washington from 1990-1998. 3 reported cases in 1998, (0.3/100,000). Nationally, there were 82 cases reported in 1998.

Morbidity: Systemic bacterial disease usually with fever, chills, headache, joint involvement with duration of days to months to a year or more. Severe cases can result in skeletal (20-60%) and genitourinary system (2-20%) complications

Mortality/case fatality rate: Less than 2% in untreated cases. There was one death due to brucellosis in 1997 in the United States.

Communicability and potential for outbreaks (or impact on others): Bacteria are carried by cattle, swine, goats, sheep and dogs. Human exposure occurs via direct contact with animal tissues and fluids, (especially placental membranes), or ingestion of raw milk or milk products. Cases in the United States are commonly exposed outside of the country. Washington has been bovine brucellosis free since 1988. No person-person transmission recognized but there is a risk of transmission in laboratories. Cases are usually sporadic, with occasional outbreaks linked to foods.

Preventability and treatability: Avoid raw milk and milk products. Use precautions (gloves, boots) when handling animal carcasses, tissues, especially in occupational settings Treatment with antibiotics.

Necessity for immediate public health response: Investigate case to identify source of infection. Report to Department of Agriculture and test suspect animals

CSTE/CDC recommendation for reporting: Reportable to CDC and CSTE recommended.

WHO interest: Class 2B

Agricultural impact: Bovine brucellosis free since 1988. Livestock case could threaten this status.

Public concern about condition (now and historically): Low

Other potential sources of data about the condition:
Wild animals, exotic species- Department of Fish and Wildlife. Washington Department of Agriculture has testing requirements for cattle entering state. Animal cases - Washington Department of Agriculture, US Department of Agriculture

Emergent condition: No

Action(s) to be taken by public health using the data: Investigate cases to identify source of infection. Notify Department of Agriculture, if linked to animal exposure in state.

Clinical description: An illness characterized by acute or insidious onset of fever, night sweats, undue fatigue, anorexia, weight loss, headache, and arthralgia

Laboratory criteria for diagnosis:

- Isolation of *Brucella* sp. from a Clinical specimen, or
- Fourfold or greater rise in *Brucella* agglutination titer between acute- and convalescent-phase serum specimens obtained greater than or equal to 2 weeks apart and studied at the same laboratory, or
- Demonstration of *Brucella* sp. in a Clinical specimen by immunofluorescence.

Case classification: Probable: a clinically compatible illness that is epidemiologically linked to a confirmed case or that has supportive serology (i.e., *Brucella* agglutination titer of greater than or equal to 160 in one or more serum specimens obtained after onset of symptoms). **Confirmed:** a clinically compatible illness that is laboratory confirmed.

CAMPYLOBACTERIOSIS (Campylobacter jejuni, C. coli, any C. species)

Supporting Information to Justify Notification

Incidence: 901cases in 1998. 15.8 cases/100,000 persons.

Morbidity: There is variable severity with diarrhea, abdominal pain, malaise, fever, nausea for 2-5 days typically. Infections range from asymptomatic to rare severe sequelae.

Mortality/case fatality rate: Approximately one deaths occurs annually (0.02/100,000) for a case fatality rate of 1/1000.

Communicability and potential for outbreaks (or impact on others): Exposure to bacteria occurs via ingestion of contaminated foods(undercooked chicken, pork, raw milk, contaminated water), contact with pet animals or farm animals, and infected infants (fecal-oral transmission). Person-person transmission appears to be rare. Usually isolated cases, outbreaks uncommon.

Preventability and treatability: Cook meats adequately, drink pasteurized milk, use a safe drinking water source, avoid cross contamination from raw meats, wash hands after handling pets and contact with farm animals.

Necessity for immediate public health response: Investigate cases to identify outbreaks, source of infection, prevent additional cases.

CSTE/CDC recommendation for reporting: No

WHO interest: Class 2B

Agricultural impact: Possible impact on poultry industry.

Public concern about condition (now and historically): Historically low, recently (1997) national press coverage raised public awareness and increased calls to health agencies.

Other potential sources of data about the condition: Although information on hospitalized cases is available through CHARS, delay in receiving the data would not allow immediate public health response.

Emergent condition: Yes

Public health action: Ideally case investigations would detect possible or real outbreaks and identify their source. Also thorough investigation of every cases would allow determination of attributable risk for each of possible sources, i.e. chicken, milk, water, animal contact. This data would be compiled by DOH and shared with the local health departments and other reporters to be used in their prevention/education efforts.

Clinical description: An illness of variable severity commonly manifested by diarrhea, abdominal pain, nausea, and sometimes vomiting. Asymptomatic infection may occur, and the organism may cause rare severe disease.

Laboratory criteria for diagnosis: Isolation of *Campylobacter* from a clinical specimen.

Case classification: **Probable:** a clinically compatible illness that is epidemiologically linked to a confirmed case. **Confirmed:** a case that is laboratory confirmed

CANCER

Supporting Information to Justify Notification

Incidence/Prevalence: In 1997, the Washington State Cancer Registry (WSCR) received 26,517 reports of new cases of cancer. This translates to 432.2/100,000 persons. Approximately 1/3 of Washingtonians develop cancer at some point in their lives.

Morbidity: The severity of cancer depends on the stage at diagnosis and the site and histology of the cancer. Overall, 40% of people diagnosed with cancer die within five years. Treatment of most cancer requires chemotherapy, radiation, and/or surgery. Cancer treatment may include extended hospitalizations.

Mortality/ Case-fatality rate: In 1997, there were 10,065 cancer deaths in Washington residents. Approximately 25% of Washingtonians die of cancer. The mortality rate varies by type of cancer. The mortality rates for Washington were 156.9/100,000. For all cancer combined (excluding in-situ), the 5-year case-fatality rate for the United States is approximately 40%. For some common cancers, such as breast and

colorectal, case-fatality rates can be reduced through early detection and treatment. In 1999, an estimated 563,100 Americans died of cancer---more than 1,500 people a day.

Communicability/Potential for outbreaks: Most cancer is of unknown etiology . However, infectious agents are implicated in several types of cancer including cervical and liver cancer and Kaposi's sarcoma. Public health interventions are available for primary and secondary prevention of these cancers. The public, including citizens and health care providers, often perceive clusters (outbreaks) of cancer which they believe to be associated with local factors, such as environmental exposures. While investigation of cancer clusters most often does not identify an etiologic agent, proper investigation of the cluster is important to keep concerns from escalating.

Preventability and treatment: There are primary and/or secondary prevention measures for four (breast, lung, colorectal, and melanoma) of the five most common cancers in Washington. Primary prevention for these cancers includes lifestyle change, such as smoking cessation, a diet high in fruits and vegetables, exercise, avoiding sunburn. Secondary prevention includes screening to enable diagnosis at an early stage. For most types of cancer treatment is more successful with early stage of diagnosis. Primary and secondary prevention measures are also available for some less common types of cancer. For example, cancer of the liver and stomach may be prevented by vaccination for Hepatitis and proper treatment of stomach ulcers, respectively. Screening for cervical cancer allows for treatment of precursor lesions and avoidance of invasive disease.

Need for immediate public health response: Given the long latency periods for the development of most cancer and the non-communicable nature of most cancers, there is generally not an immediate need for a public health response to control disease. However, prompt response to public concerns can prevent escalation of those concerns to a level requiring large resources to address issues.

CSTE/CDC Interest: Reporting of all cancer is not on the CSTE list, but is strongly supported by CDC.

WHO Interest: WHO does not require reporting of cancer. However, a large portion of WHO's resources is devoted to cancer surveillance through the International Agency for Research on Cancer (IARC). The IARC supports surveillance activities such as the publication of "Cancer Incidence on Five Continents" and the WHO "Cancer Mortality Databank."

Agriculture: Some cancer may be related to agriculture. For example, there is evidence that cancers of lymphatic and hematopoietic tissues are more prevalent in people in agriculturally related occupations compared to those in other occupations.

Public concern: There is a large public concern about causes and treatment of cancer. Typically the WSCR receives inquiries from citizens concerned about cancer in their communities. In the past several years, a number of these concerns have included legislative involvement.

Other sources: For cancers which are rapidly fatal or require hospitalization, death certificate and CHARS data can be used to estimate incidence and prevalence. However, these are not suitable sources for three (breast, prostate, and melanoma) of the five most common types of cancer. These sources are also not suitable for cervical cancer, for which there are primary and secondary preventions. As more procedures move to outpatient settings, CHARS data will become less suitable for cancer surveillance. The CHARS and death data also do not contain information necessary for the control of cancer, such as stage of disease at diagnosis.

Emergent conditions: While cancer is not an emergent condition, as new causes, types of screening, and treatments become known, new public health prevention efforts guided by surveillance activities become possible.

Actions: Cancer registry data have been used by state and local health in conducting health needs assessments. They have also been used to investigate public concerns regarding cancer clusters. We plan to use the data to look at geographic variation in stage at diagnosis for melanoma, breast, cervical, and colorectal cancers and to use this information to determine where additional screening and educational efforts are needed. Breast cancer data are routinely linked to mammography data for quality improvement of mammogram reading. As more years of data accrue, these data will be useful in looking at trends in cancer incidence. Because most cancer is of unknown etiology, descriptive epidemiology is helpful in providing clues about etiologic factors.

Clinical description: Varies by site. See WSCR informational literature.

Laboratory criteria for diagnosis: See WSCR informational literature.

CHANCROID

Supporting Information to Justify Notification

Incidence: 1 reported case in 1997. This condition is nearing elimination in Washington state. Even though the incidence is quite low, rare disease surveillance is still important in terms of the public's health, as new cases become sentinel health indicators. Some scientists argue that even one case of a rare disease is an epidemic, especially when no cases is the norm. Nationally there were 6 reported chancroid cases in 1998.

Morbidity: Long-term consequences of chancroid infection are unknown.

Mortality/Case-fatality rate: There was one reported chancroid death in 1991. There has not been a reported chancroid fatality in Washington to our knowledge.

Communicability and potential for outbreaks (or impact on others): Highly contagious. Eighty percent of persons (men and women) acquire chancroid infection upon initial exposure. The transmission efficiency of chancroid is 1.5-6 times greater than Chlamydia.

The only lab in the United States that processes chancroid specimens is located in Seattle.

Preventability and treatability: Treatment with ceftriaxone or erythromycin is recommended and usually leads to cure.

Necessity for immediate public health response: High. Chancroid is highly infectious and very efficiently transmitted. If an outbreak occurs, traditional control efforts of contact identification and treatment should be intensified.

CSTE/CDC recommendation for reporting: Reportable to CDC without identifiers and recommended by CSTE.

WHO interest: Class 2B.

Agricultural impact: None.

Public concern about condition (now and historically): "Americans seriously underestimate their risk for STDs; 77% of women and 72% of men at high risk for STDs surveyed were not concerned about acquiring an STD." (The Hidden Epidemic, Institute of Medicine, 1997, page 118)

Reporters of data: Providers of care are required to report confirmed cases to their local health jurisdiction using a state-approved case report.

Other potential sources of data about the condition: None.

Emergent condition: No.

Public health action: Work with local Disease Intervention Specialists (DIS) to conduct partner notification and assure persons exposed to disease are examined and appropriately treated. Review treatment regimens to assure that adequate medications have been provided to persons diagnosed with disease. Target educational outreach for adolescents and others at high risk of infection. Work with local health jurisdictions to motivate behavioral change in high-risk populations (e.g. those with repeat infections).

Clinical description: A sexually transmitted disease characterized by painful genital ulceration and inflammatory inguinal adenopathy. The disease is caused by infection with *Haemophilus ducreyi*.

Laboratory criteria for diagnosis: Isolation of *H. ducreyi* from a Clinical specimen

Case classification: Probable: a clinically compatible case with one or more painful genital ulcers and both a) no evidence of *Treponema pallidum* infection by darkfield examination of ulcer exudate or by a serologic test for syphilis performed at least 7 days after onset of ulcers, and b) the Clinical presentation of the ulcer(s) is not typical of disease caused by herpes simplex virus (HSV), or HSV culture is negative
Confirmed: a case that is laboratory confirmed

CHLAMYDIA TRACHOMATIS INFECTION

Supporting Information to Justify Notification

Incidence: 10,997 reported cases in 1998 (193 per 100,000 persons). Nationally there were 604,420 reported cases (236.57 per 100,000 persons).

Morbidity: Severe health consequences if untreated, including PID, ectopic pregnancy, and infertility for women, as well as adverse outcomes for infants. Epididymitis and Reiter's syndrome can occur in untreated males.

Mortality/Case-fatality rate: Zero; however, deaths from the complications of untreated Chlamydia, especially ectopic pregnancy, could occur. No maternal deaths related to ectopic pregnancy were recorded in Washington state in 1995 or 1996.

Communicability and potential for outbreaks (or impact on others): Medium to high. An increase in asymptomatic infections in the infected population increases the probability of undetected spread of infection. Eighty-five percent of women are asymptomatic; 40% of men are asymptomatic. No data available on risk of infection per exposure for homosexual sexual encounters.

Preventability and treatability: Prevention measures include screening, appropriate treatment, and partner management. New treatment regimens include the advent of single dose treatment (azithromycin) for both men and women. Also, a seven day course of doxycycline or tetracycline can be used. If therapy appropriately taken, cure should result in near 100% of cases.

Necessity for immediate public health response: Medium. Outbreaks will have no impact on patient mortality; however, to assure continuing decreases in disease, control measures should be continued at

present levels. If an outbreak occurs, traditional control measures of contact investigation and treatment should be intensified.

CSTE/CDC recommendation for reporting: Reportable to CDC without identifiers. CSTE recommends the reporting of genital Chlamydia only.

WHO interest: Class 2B

Agricultural impact: None.

Public concern about condition (now and historically): "Americans seriously underestimate their risk for STDs; 77% of women and 72% of men at high risk for STDs surveyed were not concerned about acquiring an STD." (The Hidden Epidemic, Institute of Medicine, 1997, page 118)

Reporters of data: Providers of care are required to report confirmed cases to their local health jurisdiction using a state-approved case report.

Other potential sources of data about the condition: State-sponsored active surveillance is performed through the Region X Chlamydia Screening Project. All positive Chlamydia cultures (and in 1997, PCRs) are followed up with local health jurisdictions for case reports. Inpatient discharge data (CHARS) would be inadequate for Chlamydia as no cases of Chlamydia, per se, would require hospitalization; rather, CHARS may have cases of PID or ectopic pregnancy resulting from untreated Chlamydia.

Emergent condition: This disease is not emergent but new testing methods developed in the last 20 years has resulted in the early identification and treatment of Chlamydia. The installation of the national infertility prevention project through universal and selective screening of women for Chlamydia has assisted in our understanding of the epidemiology of this disease.

Public health action: Work with local Disease Intervention Specialists (DIS) to conduct partner notification and assure persons exposed to disease are examined and appropriately treated. Review treatment regimens to assure that adequate medications have been provided to persons diagnosed with disease. Target educational outreach for adolescents and others at high risk of infection. Work with local health jurisdictions to motivate behavioral change in high-risk populations (e.g. those with repeat infections).

Clinical description: Infection with *Chlamydia trachomatis* may result in urethritis, epididymitis, cervicitis, acute salpingitis, or other syndromes when sexually transmitted. Perinatal infections may result in inclusion conjunctivitis and pneumonia among newborns. Other syndromes caused by *C. trachomatis* include lymphogranuloma venereum (see Error! Bookmark not defined.) and trachoma.

Laboratory criteria for diagnosis

- Isolation of *C. trachomatis* by culture, or
- Demonstration of *C. trachomatis* in a Clinical specimen by antigen detection methods

Case classification: Confirmed: a case that is laboratory confirmed

CHOLERA

Supporting Information to Justify Notification

Incidence: In Washington two 1992 cases and one 1986 case were associated with travel. Nationally there were 17 cases of cholera reported in 1998 (0.01 per 100,000 persons).

Morbidity: Severe diarrhea can lead to dehydration and death.

Mortality/case fatality rate: Case fatality is less than 1% with medical intervention. Without treatment the case fatality rate can exceed 50%. Nationally the last reported fatalities (2) due to cholera were in 1996.

Communicability and potential for outbreaks (or impact on others): Transmission can occur through contamination of food or unchlorinated drinking water. Large outbreaks occur elsewhere on the planet in crowded areas without safe drinking water supplies.

Preventability and treatability: Sanitation and drinking water treatment prevent the spread. Treatment is rehydration and antibiotics. Vaccination is available for travelers to areas with endemic cholera.

Necessity for immediate public health response: Source of exposure should be determined. Contacts who may have been exposed to the case should be given antibiotic prophylaxis and excluded from risk occupations. Under emergency situations, measures should be adopted to ensure a safe drinking water supply.

CSTE/CDC recommendation for reporting: Reportable to CDC without identifiers and recommended by CSTE.

WHO interest: Class 1.

Agricultural impact: None

Public concern about condition (now and historically): Historically cholera was epidemic throughout the world. In the 20th century epidemics have occurred in Asia, Africa, and South America. In 1997, cholera was reported in Acapulco, Mexico, following disruption of drinking water systems due to a hurricane. Travelers with concerns should contact DOH for information.

Other potential sources of data about the condition: None

Emergent condition: Cholera is an emerging pathogen because new strains occur and because new geographic areas are affected, such as a South American epidemic beginning in 1991 in Peru.

Public health action: Trace contacts and provide chemoprophylaxis, educate case patient, exclude case and symptomatic contacts from food handling and other risk occupations.

Is there a statute that requires reporting of the data? If so please specify. RCW 70.05.

Clinical description: An illness characterized by diarrhea and/or vomiting. Severity is variable.

Laboratory criteria for diagnosis:

- Isolation of toxigenic (cholera toxin-producing) *Vibrio cholerae* O1 from stool or vomitus, or
- Significant rise in vibriocidal or antitoxic antibodies in acute- and early convalescent-phase sera, or
- Significant fall in vibriocidal antibodies in early and late convalescent-phase sera among persons not recently vaccinated

Case classification: Confirmed: a clinically compatible illness that is laboratory confirmed
Comment: When other cases are known to be occurring, a less than fourfold rise in titer between acute- and convalescent-phase serum may be considered significant. Likewise, a less than fourfold fall between early and late convalescent-phase sera may be important in these circumstances. Only confirmed cases should be reported to the NNDSS. Illnesses due to strains of V. cholerae other than toxigenic *V. cholerae* O1 should not be reported as cases of cholera.

CRYPTOSPORIDIOSIS (Cryptosporidium parvum)
Supporting Information to Justify Notification

Incidence: Surveillance data for Washington are not available. Outbreaks have been reported in Washington. Nationally there were 3,793 cases in 1998, (1.61 per 100,000).

Morbidity: This protozoal infection of the intestine can be without symptoms but often results in prolonged diarrhea which may be severe in individuals with AIDS.

Mortality/case fatality rate: Low.

Communicability and potential for outbreaks (or impact on others): Transmission is through fecal-oral spread or through contaminated food or water. Infected humans and animals can transmit the infection. Outbreaks occur in day care centers and with contaminated drinking water supplies.

Preventability and treatability: Sanitation and safe drinking water supplies control transmission. There is no specific treatment.

Necessity for immediate public health response: Outbreak investigation.

CSTE/CDC recommendation for reporting: Reportable to CDC without identifiers and recommended by CSTE.

WHO interest: Class 3B

Agricultural impact: Cattle are a reservoir. An outbreak from contaminated apple juice occurred in Maine.

Public concern about condition (now and historically): Low in the absence of an outbreak.

Other potential sources of data about the condition: None

Emergent condition: Yes

Public health action: Outbreak investigation, education of case patient.

Is there a statute that requires reporting of the data? If so please specify. No

Clinical description: An illness caused by the protozoan *Cryptosporidium parvum* and characterized by diarrhea, abdominal cramps, loss of appetite, low-grade fever, nausea, and vomiting. Infected persons may be asymptomatic. The disease can be prolonged and life-threatening in severely immunocompromised persons.

Laboratory Criteria for Diagnosis

- Demonstration of *Cryptosporidium* oocysts in stool, or
- Demonstration of *Cryptosporidium* in intestinal fluid or small bowel biopsy specimens, or
- Demonstration of *Cryptosporidium* antigen in stool by a specific immunodiagnostic test such as enzyme-linked immunosorbent assay (ELISA)

Case Classification: Confirmed, symptomatic: A laboratory-confirmed case associated with one or more of the symptoms described in the Clinical description. **Confirmed, asymptomatic:** A laboratory-confirmed case not associated with any of the Clinical symptoms

CYCLOSPORIASIS

Supporting Information to Justify Notification

Incidence: Surveillance data for Washington are not available. Cyclosporiasis is a newly reportable condition nationally, so data are not yet available.

Morbidity: This parasitic infection of the intestine causes prolonged diarrhea, weight loss, and fatigue.

Mortality/case fatality rate: Presumed low.

Communicability and potential for outbreaks (or impact on others): Transmission is through contaminated food and water. Cyclospora is spread by people ingesting something, for example, water or food that was contaminated with infected stool. For example, outbreaks of cyclosporiasis have been linked to various types of fresh produce. Cyclospora needs time (days or weeks) after being passed in a bowel movement to become infectious. Therefore, it is unlikely that Cyclospora is passed directly from one person to another.

Preventability and treatability: Avoiding water or food that may be contaminated with stool may help prevent cyclospora infection. People who have previously been infected with cyclospora can become infected again. Antibiotic treatment is appropriate. Identification of contaminated foods. The recommended treatment for infection with Cyclospora is a combination of two antibiotics, trimethoprim-sulfamethoxazole, also known as Bactrim*, Septra*, or Cotrim*. People who have diarrhea should rest and drink plenty of fluids.

Necessity for immediate public health response: Outbreak investigations may identify contaminated products and prevent additional cases.

CSTE/CDC recommendation for reporting: Reportable to CDC without identifiers and recommended by CSTE.

WHO interest:

Agricultural impact: Outbreaks have occurred from imported raspberries and pesto. It is unknown whether animals can be infected and pass infection to people.

Public concern about condition (now and historically): Low.

Other potential sources of data about the condition: None.

Emergent condition: Yes.

Public health action: Outbreak investigation, public education.

Clinical description: An illness of variable severity caused by the protozoan Cyclospora cayetanensis and commonly characterized by watery diarrhea, loss of appetite, weight loss, abdominal bloating and cramping, increased flatus, nausea, fatigue, and low-grade fever. Vomiting also may be noted. Relapses and asymptomatic infections can occur.

Laboratory criteria for diagnosis: Demonstration of Cyclospora oocysts (by morphologic criteria or by demonstration of sporulation) or Cyclospora DNA (by polymerase chain reaction) in stool, duodenal/jejunal aspirates or small-bowel biopsy specimens.

Case classification: Probable: a clinically compatible case that is epidemiologically linked to a confirmed case. **Confirmed:** a case that is laboratory confirmed

DIPHTHERIA

Supporting Information to Justify Notification

Incidence: The incidence of diphtheria has declined steadily since the 1920s. Since 1980, there have been fewer than 5 cases annually in the US. The last major outbreak in the US was in Seattle in the 1970s. In recent years, disarray of the public health infrastructure of former USSR countries has led to many cases with global public health implications.

Morbidity: There are two forms of diphtheria, respiratory and cutaneous. Cutaneous diphtheria is usually mild. Respiratory diphtheria usually affects the tonsils and pharynx and asphyxiation may occur when the membrane obstructs breathing. Other severe complications include myocarditis and nerve paralysis. When complications occur, recovery may take months.

Mortality/case fatality rate: The case-fatality rate is 5-10% with death rates up to 20% in persons under 5 years of age or over 40 years of age.

Communicability and potential for outbreaks (or impact on others): Diphtheria is transmitted from person-to person through respiratory tract secretions. Rarely transmission may occur from skin lesion discharges. Acute cases may transmit the disease for 2-4 weeks but chronic carriers may shed organisms for over 6 months.

Preventability and treatability: Diphtheria vaccine used in a series of 3 or 4 doses, has a Clinical efficacy of 95-97% for approximately 10 years. Protective immunity can be maintained by booster doses every 10 years. Diphtheria cases are treated with diphtheria antitoxin and antibiotics and isolation with respiratory support and airway maintenance when indicated.

Necessity for immediate public health response: Immediate public health response is necessary to identify and evaluate contacts and to administer necessary prophylaxis to prevent further spread.

CSTE/CDC recommendation for reporting: Reportable to CDC recommended. The cutaneous form of diphtheria is not nationally reportable.

WHO interest: Class 2A

Agricultural impact: None.

Public concern about condition (now and historically): Public concern about diphtheria has diminished dramatically since fifty years ago when it was a major cause of death among both adults and children.

Other potential sources of data about the condition: Hospital discharge data can give information about hospitalized cases and mortality data from vital records can identify deaths that may be due to diphtheria.

Emergent condition: No, diphtheria is a well known condition to public health practitioners.

Public health action: Data from diphtheria surveillance is used to assess progress toward the year 2000 disease elimination goal for persons less than25 years of age. It is also used to characterize persons or areas so that additional intervention efforts can be focused to reduce disease incidence.

Is there a statute that requires reporting of the data? If so please specify. No.

Clinical description : An upper respiratory tract illness characterized by sore throat, low-grade fever, and an adherent membrane of the tonsil(s), pharynx, and/or nose.

Laboratory Criteria for Diagnosis: Isolation of *Corynebacterium diphtheriae* from a Clinical specimen Histopathologic diagnosis of diphtheria

Case Classification: Probable: A clinically compatible illness that is not laboratory confirmed and is not epidemiologically linked to a laboratory-confirmed case. **Confirmed:** A clinically compatible illness that is laboratory confirmed or epidemiologically linked to a laboratory-confirmed case

DISEASES OF SUSPECTED FOODBORNE OR WATERBORNE ORIGIN

Supporting Information to Justify Notification

Incidence: Varies by year since only outbreaks and not single cases are reported. 706 cases reported in 1996 (12.8/100,000).

Morbidity: Varies with etiology. see Salmonellosis, E. coli 1057:H7, campylobacteriosis.

Mortality/case fatality rate: Varies with etiology.

Communicability and potential for outbreaks (or impact on others): Very high. All reports are outbreaks.

Preventability and treatability: Varies with etiology. Known prevention strategies of temperature control and handwashing are essential. Some etiologies are difficult to treat (E. coli 0157:H7, botulism). Very important to investigate and report these outbreaks to prevent additional exposures and in some situations avoid person-to-person transmission.

Necessity for immediate public health response: Yes, to prevent further cases, and identify etiologic agent.

CSTE/CDC recommendation for reporting: Reportable to CDC and CSTE recommended.

WHO interest: Yes, depending on etiology.

Agricultural impact: Yes; many etiologies linked to animal production and farming practices. Adverse publicity can affect agriculture. Control measures are sometimes expensive.

Public concern about condition (now and historically): Very high currently, media has covered extensively.

Emergent condition: Yes, *Salmonella* Typhimurium DT104, *Salmonella* enteritidis, E. coli 0157:H7, cryptosporidium

Public health action: Provide education to public, media about causes and preventive measures. Provide education to local health departments, targeting foodborne hazards. Emergency response during outbreaks, recall of contaminated foods. Investigate all reports of illness, initiate appropriate prevention strategies. Educate the public/media about prevention strategies.

Clinical description: Disease clusters only. Two or more cases from a suspected common source, within a 24 hour period.

Laboratory criteria for diagnosis: Varies with etiology.

ESCHERICHIA COLI INFECTIONS (Including *E.coli.* O157:H7)

Supporting Information to Justify Notification

Incidence: 144 cases (2.5/100,000). Nationally, there were 3,161 reported cases of *E.coli.* O157:H7 reported in 1998. This translates to a rate of 1.28/100,000.

Morbidity: Illness ranges from minimal intestinal symptoms to bloody diarrhea, hemolytic uremic syndrome (HUS) with kidney failure which may be temporary or permanent, neurologic complications, and death.

Mortality/case fatality rate: Mortality is 0-3 deaths per year in Washington, typically pediatric cases.

Communicability and potential for outbreaks (or impact on others): Exposure occurs via ingestion of the organism in food, water, or from contaminated hands after touching cattle. Prolonged intestinal carriage of the organism can occur and result in person-to-person transmission through the fecal-oral route, a particular risk when children are infected. Contaminated foods, including commercial products such as ground beef, juice, and sprouts, have been responsible for large outbreaks. Waterborne transmission is also possible, including through contaminated swimming water.

Preventability and treatability: Personal sanitation, safe drinking water, and proper food handling reduce transmission. Treatment is entirely supportive, including dialysis when needed.

Necessity for immediate public health response: Identification of the source of exposure and prevention of further transmission require prompt public health response. Cases and ill contacts are excluded from food handling.

CSTE/CDC recommendation for reporting: Reportable to CDC without identifiers and recommended by CSTE.

WHO interest: Class 2B

Agricultural impact: None.

Public concern about condition (now and historically): In Washington, three outbreaks associated with commercial products (hamburgers, salami, cider) and one outbreak associated with swimming in a natural body of water (Battle Ground Lake) have resulted in high public concern about this infection, particularly since pediatric illness and death may occur.

Other potential sources of data about the condition: None

Emergent condition: The CDC considers *E. coli* O157:H7 to be an emerging pathogen.

Public health action: Outbreak investigation, notification of the public with product recalls, education of case patient.

Clinical description: An infection of variable severity characterized by diarrhea (often bloody) and abdominal cramps. Illness may be complicated by hemolytic uremic syndrome (HUS) or thrombotic thrombocytopenic purpura (TTP); asymptomatic infections may also occur.

Laboratory Criteria for Diagnosis:

- Isolation of *E. coli* O157:H7 from a specimen, or
- Isolation of Shiga-like toxin-producing E. coli O157:NM* (nonmotile) from a clinical specimen

Case Classification: Suspect: A case of post-diarrheal HUS or TTP (see HUS Clinical description)
Probable:

- Isolation of *E. coli* O157 from a Clinical specimen, pending confirmation of H7 or Shiga-like toxin, or
- Bloody diarrhea, HUS, or TTP that is epidemiologically linked to a confirmed or probable case

Confirmed: A clinically compatible illness that is laboratory confirmed.

Comment: Confirmation is based on laboratory findings, and Clinical illness is not required. Suspect, probable, and confirmed cases should be reported to local or state health departments. **Only confirmed cases are reported nationally**.

ENCEPHALITIS, VIRAL, ARTHROPOD-BORNE
Western Equine Encephalitis (WEE)
Supporting Information to Justify Notification

Incidence: Last documented case of WEE with exposure in Washington was in 1982.

Morbidity: Most cases are asymptomatic. Symptoms range from fever, stiff neck and headache to severe illness involving brain, spinal cord and meninges with stupor, coma, tremors, convulsions and death. Illness is more severe in infants.

Mortality/case fatality rate: Overall 0.3-60% for all types arthropod-borne encephalitis

Communicability and potential for outbreaks (or impact on others): WEE is virus transmitted to humans by the bite of an infected mosquito. Horses can also be infected by mosquitoes. Wild birds and small mammals serve as reservoir host for virus. There is no person-to-person transmission. Outbreaks may occur in regions of US with warm weather and high mosquito populations.

Preventability and treatability: Reduce mosquito contact (put screens on windows, avoid being outside at certain hours), reduce mosquito populations, use repellents. Report horse cases, which may serve as sentinel for human cases. No specific treatment.

Necessity for immediate public health response: Investigate to identify additional cases as well as presence of mosquitoes or horse cases. Recommend control measures.

CSTE/CDC recommendation for reporting: Reportable to CDC and CSTE recommended.

WHO interest: Class 2A.

Agricultural impact: Cases may occur in horses.

Public concern about condition (now and historically): Low, may be higher in eastern Washington where previous cases have occurred.

Other potential sources of data about the condition: CHARS database -human cases
Mosquito data (population, species, rate of infection) - Mosquito Control Districts, United States Navy,
Bird surveillance data - occurs in emus, ostriches - Department of Agriculture/Department of Health

Emergent condition: No

Public health action: Investigate cases to find other missed cases, potential mosquito infection source, recommend control measures.

Clinical description: Infection ranges from asymptomatic to mild aseptic meningitis or severe encephalitis.

Laboratory criteria for diagnosis; (NOT FINAL VERSION)
- demonstration of specific IgM in acute-phase serum or CSF
- serologic testing of paired sera
- isolation of virus from blood or brain

Case classification: clinically compatible illness with laboratory confirmation

GIARDIASIS (GIARDIA LAMBLIA)

Supporting Information to Justify Notification

Incidence: 740 cases (13/100,000) in 1998.

Morbidity: This protozoal infection of the intestine causes prolonged diarrhea, cramps, bloating, steatorrhea, fatigue and weight loss.

Mortality/case fatality rate: There was one death reported in 1998 that was attributable to giardiasis in Washington.

Communicability and potential for outbreaks (or impact on others): Transmission occurs from animals and humans through fecal-oral routes. Contaminated food and water can transmit the infection. Outbreaks occur in day care centers. Infection may result from contaminated water supplies during travel or outdoor recreation.

Preventability and treatability: Sanitation and safe drinking water control transmission. Treatment is available.

Necessity for immediate public health response: Outbreak investigations.

CSTE/CDC recommendation for reporting: Reporting not CSTE recommended.

WHO interest: Class 3B

Agricultural impact: None.

Public concern about condition (now and historically): Low except during day care outbreaks or in back country areas. Those involved in outdoor recreation may have questions about drinking water safety.

Other potential sources of data about the condition: None.

Emergent condition: No

Public health action: Outbreak investigations, education of case patients.

Is there a statute that requires reporting of the data? If so please specify. No.

Clinical description: An illness caused by the protozoan *Giardia lamblia* and characterized by diarrhea, abdominal cramps, bloating, weight loss, or malabsorption. Infected persons may be asymptomatic.

Laboratory criteria for diagnosis:

- Demonstration of *G. lamblia* cysts in stool, or
- Demonstration of *G. lamblia* trophozoites in stool, duodenal fluid, or small bowel biopsy, or
- Demonstration of *G. lamblia* antigen in stool by a specific immunodiagnostic test such as enzyme-linked immunosorbent assay (ELISA)

Case classification: Confirmed, symptomatic: a laboratory-confirmed case associated with one or more of the symptoms described above. **Confirmed, asymptomatic:** a laboratory-confirmed case associated with none of the above symptoms.

GONORRHEA

Supporting Information to Justify Notification

Incidence: 1,949 reported cases in 1996 (34 cases per 100,000 persons). This continues the decreasing trend of reported gonorrhea incidence in Washington, and is the lowest incidence rate since 1920. Nationally there were 335,642 cases reported (132.88/100,000).

Morbidity: Severe health consequences include pelvic inflammatory disease (PID) and ectopic pregnancy for women, infertility for both men and women, and adverse outcomes for infants. Ten to 40% of women with untreated gonorrhea will develop PID; among women with PID, scarring sequelae will include involuntary infertility (20%), ectopic pregnancy (9%), and chronic pelvic pain (18%).

Mortality/Case-fatality rate: Zero in Washington; however, deaths from the complications of untreated gonorrhea, especially ectopic pregnancy, could occur. Nationally there were 3 deaths reported in 1997 due to gonococcal infections.

Communicability and potential for outbreaks (or impact on others): Medium to high. The rate of sex partner change within the population along with the infectivity and probability of transmission per exposure contributes to the communicability. The risk of female acquisition from males is 60-90% per exposure. The risk of male acquisition from females is 20-30% per exposure. thirty-80% of women are asymptomatic; fewer than 5% of men are asymptomatic. No data available on risk of infection per exposure for homosexual sexual encounters.

Preventability and treatability: Prevention measures include screening, appropriate treatment, and partner management. Gonorrhea can be easily treated with a course of ceftriaxone, doxycycline or oral ciprofloxacin. If taken appropriately, effectivity is usually 100%.

Necessity for immediate public health response: Medium. Outbreaks will have no impact on patient mortality; however, to assure continuing decreases in disease, control measures should be continued at present levels. If an outbreak occurs, traditional control measures of contact investigation and treatment should be intensified.

CSTE/CDC recommendation for reporting: Reportable to CDC without identifiers and recommended by CSTE.

WHO interest: Class 2B

Agricultural impact: None.

Public concern about condition (now and historically): "Americans seriously underestimate their risk for STDs; 77% of women and 72% of men at high risk for STDs surveyed were not concerned about acquiring an STD." (The Hidden Epidemic, Institute of Medicine, 1997, page 118)

Other potential sources of data about the condition: Inpatient discharge data (CHARS) would be inadequate for gonorrhea as no cases of gonorrhea, per se, would require hospitalization. CHARS may have cases of PID or ectopic pregnancy from untreated gonorrhea.

Emergent condition: No, this condition is well known to public health practitioners; however, antibiotic resistant strains are emerging and in need of more study.

Public health action: Work with local Disease Intervention Specialists (DIS) to conduct partner notification and assure persons exposed to disease are examined and appropriately treated. Review treatment regimens to assure that adequate medications have been provided to persons diagnosed with disease. Target educational outreach for adolescents and others at high risk of infection. Work with local health jurisdictions to motivate behavioral change in high-risk populations (e.g. those with repeat infections).

Is there a statute that requires reporting of the data? If so, please specify: RCW 70.24.125.

Clinical description: A sexually transmitted infection commonly manifested by urethritis, cervicitis, or salpingitis. Infection may be asymptomatic.

Laboratory criteria for diagnosis:

- Isolation of *Neisseria gonorrhoeae* from a Clinical specimen, or
- Observation of gram-negative intracellular diplococci in a urethral smear obtained from a man

Case classification: Probable: demonstration of gram-negative intracellular diplococci in an endocervical smear obtained from a woman, or a written (morbidity) report of gonorrhea submitted by a physician.
Confirmed: a case that is laboratory confirmed

GRANULOMA INGUINALE

Supporting Information to Justify Notification

Incidence: No cases of Granuloma Inguinale. This condition is extremely rare in Washington. Even though the incidence is quite low, rare disease surveillance is still important in terms of the public's health, as new cases become sentinel health indicators. Some scientists argue that even one case of a rare disease is an epidemic, especially when no cases is the norm. The last reported cases nationally occurred in 1995.

Morbidity: Granuloma Inguinale is rare in the United States but endemic in certain tropical and developing areas and causes extensive destruction of genital organs.

Mortality/Case-fatality rate: Zero.

Communicability and potential for outbreaks (or impact on others): Granuloma Inguinale is poorly communicable.

Preventability and treatability: Treatment for Granuloma Inguinale appears to halt progressive destruction of tissue but relapse can occur 6-18 months later despite effective initial therapy.

Necessity for immediate public health response: High. If an outbreak occurs, traditional control efforts of contact identification and treatment should be intensified.

CSTE/CDC recommendation for reporting: Reportable to CDC without identifiers and recommended by CSTE.

WHO interest: Class 3B

Agricultural impact: None.

Public concern about condition (now and historically): "Americans seriously underestimate their risk for STDs; 77% of women and 72% of men at high risk for STDs surveyed were not concerned about acquiring an STD." (The Hidden Epidemic, Institute of Medicine, 1997, page 118)

Reporters of data: Providers of care are required to report confirmed cases to their local health jurisdiction using a state-approved case report.

Other potential sources of data about the condition: None.

Emergent condition: No.

Public health action: Work with local Disease Intervention Specialists (DIS) to conduct partner notification and assure persons exposed to disease are examined and appropriately treated. Review treatment regimens to assure that adequate medications have been provided to persons diagnosed with disease. Target educational outreach for adolescents and others at high risk of infection. Work with local health jurisdictions to motivate behavioral change in high-risk populations (e.g. those with repeat infections).

Clinical description: A slowly progressive ulcerative disease of the skin and lymphatics of the genital and perianal area caused by infection with *Calymmatobacterium granulomatis.* A clinically compatible case would have one or more painless or minimally painful granulomatous lesions in the anogenital area.

Laboratory criteria for diagnosis: Demonstration of intracytoplasmic Donovan bodies in Wright or Giemsa-stained smears or biopsies of granulation tissue

Case classification: Confirmed: a clinically compatible case that is laboratory confirmed

GUNSHOT WOUNDS

Supporting Information to Justify Notification

Incidence/prevalence: Each year more than 1,400 Washington residents are injured or killed by gunshot wounds (28 cases per 100,000 persons).

Morbidity: Gunshot wounds often result in severe, long-term disability, especially in cases where there is damage to the spinal cord. There are about 830 nonfatal gunshot injuries each year; approximately half of these require hospitalization, with an average length of stay being 5 days.

Mortality/case fatality rate: Guns are the second leading mechanism of injury death in Washington State, surpassed only by motor vehicles. There are about 600 firearm-related deaths each year. The case fatality rate is approximately 42%

Communicability and potential for outbreaks or clustering
There are three major categories of gun injuries: suicides, homicides and unintentional (accidents). Shootings in these categories differ with respect to risk factors, trends, survival rates, and approaches to prevention. The following profile is based on shooting fatalities. Across all intent categories, shooting death rates are substantially higher for males compared to females.

- *Gun suicides* are substantial among teenagers and young adults, but are greatest among elderly males. From 1980 to 1995, firearm-related suicide rose 46% among persons 15 to 24 years old and increased 70% among persons 75 years of age or older.
- *Gun homicides* are most common among persons younger than 25 years. The overall rate of firearm homicide increased 40% from 1980 to 1995; most of this increase in gun homicide was due to an increase among persons under the age of 25.
- *Unintentional gunshot deaths* are most common among the young. Sixty-one percent of victims are less than 25 years of age. The overall rate of unintentional gunshot deaths decreased 10.4% from 1980 to 1995.

Preventability and treatability: The majority of gunshot wounds are treatable. The treatability (i.e., survival rate) varies significantly for unintentional vs. suicide-related vs. assault-related shootings. Preventability (primary prevention and the risks for recurrence) is also influenced by intent of the shooting. Almost all unintentional firearm injuries are preventable though the combined efforts of education, proper gun storage and safe gun handling practices. Suicide- and assault-related firearm injuries are also preventable but more research is needed to identify an optimal set of interventions for high risk segments of our population.

There is no reason to believe that rates of firearm injury must stay at current levels. Many industrialized nations with economies and political systems similar to those of the United States have rates of firearm injury that are much smaller than those in the U.S. As recently as 1950, the U.S. homicide mortality rate was half of what it was in 1993.

Necessity for immediate public health response:
Firearm injury specialists have suggested that surveillance data can be useful in helping local law enforcement agencies apprehend criminals and identify "hot spots" in need of additional police resources. Using the data in these ways will require immediate reporting and action. It has also been suggested that gunshot incidents are "sentinel events" that signal an immediate need for an intervention aimed at preventing further violence (including domestic violence). We are investigating the feasibility of collecting and using data in these ways. Currently, our assessment functions and our work with community agencies are adequately supported with information that is current to within one year.

CSTE/CDC recommendation for reporting: No

WHO Interest: No
Note: WHO has not issued a mandate for the reporting of gunshot injuries; however it has taken an active interest in injuries due to war-related and interpersonal violence, in which firearms play a central role.

Agricultural impact: None

Public concern about condition (now and historically): Public concern about gunshot wounds is very high. The recent handgun initiative (I676) showed a need for good data about this problem. Advocates

on both sides of this issue requested firearm injury data on a daily basis for several weeks prior to the election. A similar situation occurs when gun-related bills are introduced each legislative session. The high demand for firearm injury data offers some support for the continuation of a gunshot wound reporting requirement.

Emergent condition: Yes. Public health has an emerging role in the prevention of firearm injuries and violence. These conditions are not new; until recently, however, they were considered the exclusive province of the police, the courts, and the penal system.

Public health action:
To-date, firearm injury surveillance data have been used to:

- Assess the potential health impact of legislation that would require lock boxes or trigger locks as a means of protecting children from unintentional firearm injuries.
- Plan and promote gun safety curriculum and other risk reduction measures in several Washington counties.
- Support a statewide youth suicide prevention campaign.

Other strategies that offer hope for reducing firearm injuries and deaths, and for which surveillance data can be used to develop and evaluate specific interventions, include

- increasing community policing;
- greater efforts to enforce legislation barring young persons from carrying guns;
- educating physicians about the importance of counseling families with young children and adolescents on the risks of having guns at home; and
- promoting public awareness of proper gun storage and safe gun handling practices.

Clinical description: A gunshot wound that does not result in a fatality, and is treated at a health care facility as defined in WAC 246-101.

Laboratory criteria for diagnosis: None.

HAEMOPHILUS INFLUENZAE TYPE B -INVASIVE DISEASE IN CHILDREN

Supporting Information to Justify Notification

Incidence: There were 11 reported cases of Haemophilus Influenza Type B-Invasive disease reported in Washington in 1998 (0.02/100,000). This is down from a recent maximum of 319 cases with 11 deaths in 1986. Nationally there were 1,194 cases reported (0.44/100,000).

Morbidity: Up to 60% of cases occur in infants less than 1 year of age with the peak occurring in the second half of the first year. 10% of invasive cases occur in children over 5 years of age. Invasive *H. influenzae* infection may cause meningitis, bacteremia, epiglottitis, or pneumonia. Meningitis occurs in approximately 66% of children with invasive Hib with resultant hearing loss or severe permanent neurologic sequelae such as mental retardation, seizure disorder, cognitive and developmental delay, and paralysis in 15-30% of survivors. Rarely, other types of *H. influenzae* cause invasive disease.

Mortality/case fatality rate: There was one reported fatality in Washington in 1998. Nationally there were 7 reported deaths in 1997. The case-fatality rate is typically 2-5%.

Communicability and potential for outbreaks (or impact on others): Invasive Hib is thought to have limited contagious potential, presumably through droplet spread. However, situations of close contact, as in a household or day-care, outbreaks and/or secondary transmission can occur.

Preventability and treatability: Hib conjugate vaccines have been available since 1987 and current types have an efficacy of 74-100%. Antibiotic treatment with hospitalization for 10-14 days is indicated for invasive *H. influenzae* infection.

Necessity for immediate public health response: Identification of cases is important to the initiation of control measures to protect close contacts.

CSTE/CDC recommendation for reporting Reportable to CDC and CSTE recommended.

WHO interest: Class 3B

Agricultural impact: None.

Public concern about condition (now and historically): Public concern about Hib has diminished dramatically since the dramatic fall in the incidence of the disease in children since the late 1980s.

Other potential sources of data about the condition: Hospital discharge data can give information about hospitalized cases and mortality data from vital records can identify deaths that may be due to invasive Hib.

Emergent condition: No, invasive Hib is a well known condition to public health practitioners.

Public health action: Data on invasive Hib is used to monitor the effectiveness of immunization programs, assess progress towards disease elimination, and monitor continued effectiveness of vaccines.

Clinical description: Invasive disease due to *Haemophilus influenzae* may produce any of several Clinical syndromes, including meningitis, bacteremia, epiglottitis, or pneumonia

Laboratory criteria for diagnosis:

- Isolation of *H. influenzae* from a normally sterile site

Case classification: Probable: a clinically compatible illness with detection of *H. influenzae* type b antigen in cerebrospinal fluid. **Confirmed:** a clinically compatible illness that is culture confirmed

Comment: Antigen test results in urine or serum are unreliable for diagnosis of *H. influenzae* disease.

HANTAVIRUS PULMONARY SYNDROME (Sin Nombre virus)

Supporting Information to Justify Notification

Incidence: From 1993-1999, 21 cases were reported in Washington. There were 4 cases in 1995, 4 cases in 1996, 3 in 1997, 2 cases in 1998, and 5 in 1999.

Morbidity: Initially nonspecific respiratory, and gastrointestinal symptoms with fever and muscle aches. Progresses to severe respiratory distress syndrome and shock requiring mechanical ventilation in some cases.

Mortality/case fatality rate: 40% of Washington cases have been fatal, similar to national rates.

Communicability and potential for outbreaks (or impact on others): Sin nombre virus carried by rodents (primarily deer mice) in western United States, and shed in urine, feces, and saliva. Humans are exposed via inhalation of aerosols, dust in rodent infested settings. Usually single cases occur, no person-

person transmission evident in United States Outbreaks in 1993 in Four Corners area following tenfold increase in rodent population and person-person transmission in S. America in 1996. No specific treatment.

Preventability and treatability: Avoid exposure to rodents, their urine, feces, saliva and nests. Rodent control measures in living environment, workplace and recreational settings.
Disinfection of rodent infested areas. Personal protective respiratory gear where necessary.

Necessity for immediate public health response: Investigate case for source of exposure. Recommend rodent control to prevent further exposures. Provide education to case and to the community.

CSTE/CDC recommendation for Reporting: Reportable to CDC and CSTE recommended.

WHO interest: Unknown.

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Agricultural impact: Typical exposure is peridomestic but cases may have occurred in occupationally exposed agricultural workers.

Public concern about condition (now and historically): High in recent years due to extensive media coverage.

Other potential sources of data about the condition:
Potential cases - Labor and Industries/Workers Compensation data.
Rodent surveillance data- DOH - Environmental Health, United States Army, Washington State University, US Forest Service, US Navy

Emergent condition: Yes

Public health action: Investigate case (clinical and environmental assessment.) Provide education for prevention, rodent control, disinfection measures for cleanup of rodent infested areas. Determine potential source of rodent exposure (home, workplace, recreational). Conduct rodent hantavirus surveillance (prevalence, population data).

Clinical description: Hantavirus pulmonary syndrome, commonly referred to as Hantavirus disease, is a febrile illness characterized by bilateral interstitial pulmonary infiltrates and respiratory compromise requiring supplemental oxygen and simulating adult respiratory distress syndrome (ARDS). The typical prodrome consists of fever, chills, myalgias, headaches, and gastrointestinal symptoms. Typical Clinical laboratory findings include hemoconcentration, left shift in the white blood cell count, neutrophilic leucocytosis, thrombocytopenia, and circulating immunoblasts (myelocytes).

Clinical Case Definition: An illness characterized by one or more of the following Clinical features:

- A febrile illness (i.e., temperature 101°F [38.30°C]) occurring in a previously healthy person characterized by a) unexplained adult respiratory distress syndrome or b) bilateral interstitial pulmonary infiltrates with respiratory compromise requiring supplemental oxygen, developing within 72 hours of hospitalization.
- An unexplained respiratory illness resulting in death, with an autopsy examination demonstrating non-cardiogenic pulmonary edema without an identifiable cause.

Laboratory Criteria for Diagnosis:

- Detection of hantavirus-specific IgM or rising titers of hantavirus-specific IgG, or
- Detection of hantavirus-specific ribonucleic acid sequence by polymerase chain reaction in Clinical specimens, or
- Detection of hantavirus antigen by immunohistochemistry

Case Classification: Confirmed: A clinically compatible illness with laboratory criteria for diagnosis

Comment: Laboratory testing must be performed or confirmed at a reference laboratory. Because the Clinical illness is non-specific and adult respiratory distress syndrome is common, a screening Clinical description should be used to determine which patients to test. In general, a predisposing medical condition (e.g., chronic pulmonary disease, malignancy, trauma, burn, and surgery) is a more likely cause of ARDS than hantavirus, and patients who have these underlying conditions and ARDS should not be tested for hantavirus.

HEMOLYTIC UREMIC SYNDROME (HUS)

Supporting Information to Justify Notification

Incidence:. Not currently under routine surveillance. From published studies, hemolytic uremic syndrome develops in 3-7% of identified cases of *E. coli* O157:H7 infections (or 4-14 cases per year in WA, in the absence of large outbreaks).

Morbidity: Hemolytic uremic syndrome, a complication of infection with *E. coli* O157:H7, usually results in hospitalization with supportive care including dialysis and may result in permanent kidney failure.

Mortality/case fatality rate: Mortality is 1-3 deaths per year in Washington, typically pediatric cases.

Communicability and potential for outbreaks (or impact on others): Prolonged intestinal carriage of the causative organism can occur and result in person-to-person transmission through the fecal-oral route, a particular risk when children are infected. Contaminated food, including commercial products, have been responsible for large outbreaks. Waterborne transmission is also possible.

Preventability and treatability: Personal sanitation, safe drinking water, and proper food handling reduce transmission. Treatment is entirely supportive, including dialysis when needed.

Necessity for immediate public health response: Identification of the source of exposure and prevention of further transmission require prompt public health response.

CSTE/CDC recommendation for reporting: Reportable to CDC without identifiers and recommended by CSTE.

WHO interest: Class 2B

Agricultural impact: None

Public concern about condition (now and historically): In Washington, outbreaks associated with commercial products (hamburgers, salami, cider) and a swimming related outbreak have resulted in high public concern about this infection, particularly since pediatric illness and death may occur.

Other potential sources of data about the condition: None

Emergent condition: The CDC considers *E. coli* O157:H7 to be an emerging pathogen.

Public health action: Outbreak investigation, notification of the public with product recalls, education of case patient.

Clinical description: Hemolytic uremic syndrome (HUS) is characterized by the acute onset of microangiopathic hemolytic anemia, renal injury, and low platelet count. Thrombotic thrombocytopenic purpura (TTP) is also characterized by these features but also can include central nervous system involvement and fever, and may have a more gradual onset. Most cases of HUS (but few cases of TTP) occur after an acute gastrointestinal illness (usually diarrheal). Only HUS or TTP occurring after an acute diarrheal illness is reportable.

Laboratory Criteria for Diagnosis: The following are present at some time during the illness:

- Anemia (acute onset) with microangiopathic changes (i.e., schistocytes, burr cells, or helmet cells) on peripheral blood smear
- Renal injury (acute onset), evidenced by either
- Hematuria, or

- Proteinuria, or
- Elevated creatinine level (i.e., = 1.0 mg/dl in a child less than 13 years of age or = 1.5 mg/dl in an adult, or = 50% increase over baseline)

Note: A low platelet count can usually, but not always, be detected early in the illness, but it may then become normal or even high. If a platelet count obtained within 7 days after onset of the acute gastrointestinal illness is not less than150,000/mm ^{3}, other diagnoses should be considered.

Case Classification:

Probable:

- An acute illness diagnosed as HUS or TTP that meets the laboratory criteria, but for which circumstances of onset (within three weeks after onset of acute diarrhea or bloody diarrhea) have not been determined, or
- An acute illness diagnosed as HUS or TTP, with onset within 3 weeks of onset of an acute or bloody diarrhea, that meets the laboratory criteria except that microangiopathic changes are not confirmed

Confirmed: An acute illness diagnosed as HUS or TTP, that both meets the laboratory criteria and began within 3 weeks of onset of an acute or bloody diarrhea

Comment: Some investigators consider HUS and TTP to be part of a continuum of disease. Therefore, criteria for diagnosing TTP on the basis of central nervous system involvement and fever are not provided because cases diagnosed clinically as post-diarrheal TTP should also meet the criteria for HUS. These cases are reported as post-diarrheal HUS.

HEPATITIS A (HAV)

Supporting Information to Justify Notification

Incidence: In 1998, 1,037 cases were reported in Washington, for an incidence rate of 18.2/100,000 persons. Washington's incidence rate is higher than that of United States as a whole. In 1998, there were 23,229 cases reported nationally (8.59/100,000).

Morbidity: Many infections are asymptomatic or mild, without jaundice, especially among children. HAV generally causes severe illness in adults, who may be ill for a period of several weeks to several months. Severity of the illness, need for hospitalization, and deaths increase with age. About 19% of patients require hospitalization. Deaths, disability, or extended hospitalization are rare although illness can be more severe with pre-existing hepatitis C infection.

Mortality and Case-fatality Rate: There were two reported fatalities in 1998. Nationally there were 127 deaths reported in 1997. Overall, the case-fatality rate is less than 1/1,000 but for cases among children under 5 years old it is 1.5/1,000 and for adults over 50 years old it is 27/1,000.

Communicability and potential for outbreaks (or impact on others): High. Community-wide outbreaks occur and account for most of the transmission of HAV. Common-source outbreaks result from an ill food handler or contaminated product. Outbreaks have occurred in households and child care centers. Because infants and young children with HAV are often asymptomatic, they can easily transmit the disease to others if recommended hygienic measures are not followed. There are periodic outbreaks in certain populations such as American Indians, Alaskan Natives, Hispanics, and certain religious groups.

Preventability and Treatability: Education about good sanitation and recommended personal hygienic measures, including hand-washing, can help prevent HAV. An efficacious vaccine is available and is recommended for persons at increased risk of infection. Immune globulin is 80-90% effective in preventing HAV if administered prior to exposure or within 14 days following exposure. HAV infection is not treatable.

Necessity for immediate public health response: High. Immune globulin is highly effective in preventing HAV but must be given within 14 days following exposure. Due to the infectious nature of this disease, it is important to identify and eliminate any common sources of infection. Cases and ill contacts are excluded from food handling and other sensitive occupations.

CSTE/CDC recommendation for reporting: Reportable to CDC and CSTE recommended.

WHO interest: Class 2A

Agricultural impact: None

Public concern about condition: High, especially with increased media attention during local and national outbreaks or potential outbreaks. Also, immune globulin is well known to the public as a post-exposure prophylactic and they expect it to be offered to them when a potential exposure situation is identified.

Other sources of data: Although information on hospitalized cases is available through CHARS, delay in receiving the data would not allow immediate public health response.

Emerging condition: No. HAV is well known to public health officials. In the United States, epidemic cycles have occurred with peaks every 10-15 years. The latest cycles were in 1961, 1971, and 1989.

Public Health Action: Monitor trends over time; verify case and interview and counsel patient; notify and counsel contacts and refer for post-exposure prophylaxis; report data to CDC; work with CDC to obtain hepatitis A vaccine if warranted in outbreak situations; respond to media requests; recommend post-exposure prophylaxis.

Clinical description: An acute illness with discrete onset of symptoms (including loss of appetitie, abdominal discomfort, nausea, vomiting) and jaundice or elevated serum aminotransferase levels.

Laboratory Criteria for Diagnosis: IgM anti-HAV positive

Case Classification Confirmed: A case that meets the clinical description and is laboratory confirmed.
Probable: a case that meets the clinical case definition and is a contact of a person who has a laboratory-confirmed case.

ACUTE AND CHRONIC HEPATITIS B (HBV) & HBsAg-POSITIVE PREGNANT WOMEN

Supporting Information to Justify Notification

Incidence: There are 200,000-300,000 new cases per year in the US. About 1-1.5 million persons in the US have chronic HBV. The disease is highly endemic in Asian countries and Pacific Islands. Washington has the seventh largest Asian/Pacific Islander population in US Only *acute* cases are currently reportable in Washington. In 1998, 136 acute cases were reported in Washington State, for an incidence rate of 2.4/100,000 population. An estimated 22,000 births occur to HBsAg-positive (chronically infected) pregnant women per year in the US. The expected number of births to HBsAg-positive pregnant women in Washington State is 309-433 annually.

Morbidity: Many infections including most infections in infants are asymptomatic or mild. Hepatitis B generally causes mild to moderate illness with jaundice. Transmission of HBV from mother to child results in up to 90% of the infants becoming infected unless appropriate post-exposure prophylaxis is administered. Of the infants who become infected, 90% develop chronic hepatitis and up to 25% of those

chronically infected will die of liver disease (including hepatocellular carcinoma), usually as adults. Even if an infant is not infected during the perinatal period, infants born to HBsAg-positive mothers are at high risk of acquiring HBV by horizontal transmission during the first 5 years of life. About 10% of other HBV infections become chronic, and up to 10% of those cases will develop cirrhosis or other liver damage.

Mortality and Case-Fatality Rate: An estimated 4,000-5,000 deaths occur each year in the United States due to HBV. Reported deaths nationally numbered 1,030 in 1997. Infants are at highest risk of becoming chronically infected with HBV; 25% of the infants who become chronically infected die of chronic liver disease or hepatocellular carcinoma as adults.

Communicability and potential for outbreaks (or impact on others): HBV is 100 times more concentrated than HIV and, hence, more communicable. Highest titer of virus found in infected person's blood so most efficient transmission occurs via direct contact with infected blood; however, infection is also spread through sexual intercourse. Infected persons who are asymptomatic can transmit the virus to others. Overall lifetime risk of acquiring HBV in United States is 1 in 20; up to 9 in 10 for infants born to HBsAg-positive mothers (if the infants do not receive appropriate post-exposure prophylaxis). Most HBV infections in infants are asymptomatic. Infected persons who are asymptomatic can transmit the virus to others.

Preventability and Treatability: Preventability is high. Education about HBV, including transmission, long-term sequelae, and prevention measures can help decrease its incidence. Both hepatitis B vaccines licensed in the United States are 90-95% effective in preventing HBV. Screening all pregnant women for HBsAg, administering hepatitis B immune globulin (HBIG) and hepatitis B vaccine to all infants born to HBsAg-positive women, administering the vaccine to all susceptible sexual/household contacts of HBsAg-positive persons, and administering the vaccine to all newborns would reduce the overall lifetime risk of HBV infection by at least 68%. This would reduce the carrier pool (persons chronically infected). HBV infection is not treatable, although studies with a large number of anti-viral drugs are underway.

Necessity for immediate public health response: High. Hepatitis B vaccine and HBIG are highly effective in preventing HBV infection but must be given soon after exposure. The efficacy is unknown for HBIG administered over 7 days after exposure more than or later than 48 hours of age in infants born to HBsAg-positive mothers.) For these infants, it is recommended that both vaccine and HBIG be administered within 12 hours following birth. For complete protection the infants need to complete the 3-dose hepatitis B vaccine series on schedule (at 0, 1-2, and 6 months of age) and at the appropriate post-exposure dose.

CSTE/CDC recommendation for reporting: Acute cases reportable to CDC and CSTE recommended. CDC recommends that all states pass legislation to require reporting of acute *and* chronic HBV and reporting of *all* HBsAg-positive pregnant women.

WHO interest: Class 2A

Agricultural impact: None.

Public concern about condition: Medium, especially with increased media attention surrounding the new WAC requiring all children entering kindergarten and child care (less than 6 years old) to be immunized against HBV. Also, the DOH hepatitis B awareness campaigns and statewide efforts of the Immunization Action Coalition of Washington have increased awareness of the risk.

Other sources of data: Although information on hospital births is available through CHARS and the electronic birth certificate system includes information on the mother's HBsAg status, delay in receiving these data would not allow immediate public health response.

Emerging condition: No. HBV is well known to public health officials.

Public Health Action: Monitor trends over time; verify case and interview and counsel patient; notify and counsel contacts and refer for post-exposure prophylaxis; refer patients with chronic HBV infection for regular medical follow-up; verify receipt of appropriate and timely post-exposure prophylaxis (including post-vaccine testing) by each infant born to an HBsAg-positive woman; refer patients with chronic HBV infection for regular medical follow-up; report data to CDC.

Clinical description: An acute illness with discrete onset of symptoms (including loss of appetite, abdominal discomfort, nausea, vomiting) and jaundice or elevated serum aminotransferase levels.

Laboratory Criteria for Diagnosis: 1. IgM anti-HBc-positive (if done) or HBsAg-positive, and
2. IgM anti-HAV negative (if done)

Case Classification Confirmed: a case that meets the Clinical Description and is laboratory confirmed;

ACUTE AND CHRONIC HEPATITIS C (HCV)

Supporting Information to Justify Notification

Incidence: There are 35,000-180,000 new cases per year in the US. Almost 4 million persons in the US have chronic HCV. In Washington State, acute HCV cases are included in the hepatitis non-A, non-B category; most cases in this category are HCV, which is also known as bloodborne hepatitis non-A, non-B. In 1998, 29 cases were reported in this category, for an incidence rate of 0.5/100,000 population. The majority of newly infected persons have no or mild symptoms, so the reported cases are likely an underestimate of the actual number.

Morbidity: About 70-80% of persons with acute HCV are asymptomatic. However, about 85% of persons infected with HCV develop chronic hepatitis; this leads to chronic liver disease (including cirrhosis) in more than 60% of these patients. HCV infection is the most common indication for a liver transplant in the United States; it is thought to be responsible for 40-60% of all chronic liver disease in the United States. Anyone who is anti-HCV positive should be considered infectious.

Mortality and Case-fatality Rate: An estimated 8,000-10,000 deaths occur each year in the United States due to HCV. Unless effective interventions are identified, this number is expected to triple in the next 10-20 years. Reported deaths due to hepatitis C numbered 2,900 in 1997.

Communicability and potential for outbreaks (or impact on others): HCV is thought to be less communicable than hepatitis B but more communicable than HIV. Highest titer of virus is found in infected person's blood so most efficient transmission occurs via direct contact with infected blood. Sharing of IV drug equipment readly transmits HCV. Efficiency of other modes of transmission (e.g., sexual or household contact) is not yet fully determined is likely to be low.

Preventability and Treatability: Education about HCV, including transmission, long-term sequelae, and prevention measures can help decrease its incidence. However, this may necessitate behavior modification to decrease an individual's risk of infection. Continued screening of donated blood, organs,

and tissues is essential. There is no vaccine available to prevent HCV infection. Promising treatments are questionable. Studies suggest that interferon and/or certain other anti-viral drugs given early in the disease process increase the possibility of resolution of the infection.

Necessity for immediate public health response: In order to prevent further transmission of HCV, it is important to identify sexual, household, and other close contacts of the infected person so they may be counseled about HCV and prevention measures. Studies suggest that interferon and/or certain other anti-viral drugs given early in the disease process increase the possibility of resolution of the infection.

CSTE/CDC recommendation for reporting: CSTE recommended

WHO interest: Class 2A

Agricultural impact: None

Public concern about condition: Medium. LHJ and DOH staff have been receiving an increasing number of requests for information about HCV from health care providers and the general public.

Other sources of data: Although discovered in 1988 and found to be responsible for 80-90% of what was formerly called non-A, non-B hepatitis, there is still a great deal that is unknown about the transmission of HCV. Unless effective interventions are found, the mortality rate is expected to triple in the next 10-20 years. Hence, surveillance is needed to learn more about HCV.

Actions to be taken by public health using the data: Data are needed to identify trends and better define HCV's transmission. Because chronic HCV often progresses slowly, surveillance can help predict future socioeconomic impacts of this disease. As new treatments become available, it is important to have these data. Current actions include verification of cases and interviewing and counseling patients; notification and counseling of contacts; referral of patients to specialists or research studies on HCV treatment.

Clinical description: An acute illness with discrete onset of symptoms (including loss of appetitie, abdomial discomfort, nausea, vomiting) and jaundice or elevated serum aminotransferase levels.

Laboratory Criteria for Diagnosis:
- Serum aminotransferase levels 2 and 1/2 times the upper limit of normal, and
- IgM anti-HAV negative, and
- IgM anti-HBc negative (if done) or HBsAg negative, and
- Anti-HCV positive

Case Classification Confirmed: a case that meets the Clinical description and is laboratory confirmed.

HERPES SIMPLEX (Initial report only)

Supporting Information to Justify Notification

Incidence: 1,812 reported cases of initial infection in 1998 (31.7 cases per 100,000 persons).

Morbidity: Disease is severe for infants, can result in fetal malformations, severe mental retardation or brain damage. For pregnant women who are infected, spontaneous abortion or premature delivery could occur. The official recommendation of the infectious Disease Society for Obstetrics-Gynecology is to perform cesarean sections on all women with herpetic lesions during labor. (Obset Gynecol, 1988;71:779-780)

Mortality/Case-fatality rate: Zero.

Communicability and potential for outbreaks (or impact on others): Low to medium. The risk of female acquisition from males is 19% per exposure. The risk of male acquisition from females is 5% per exposure. No data available on risk of infection per exposure for homosexual sexual encounters.

Preventability and treatability: Prevention measures require behavior change, which is often difficult to sustain over time. No treatment exists to cure this viral STD infection; topical or oral treatment (e.g. acyclovir) for symptomatic flare-ups is available for both men and women. Currently the University of Washington and Seattle-King county Department of Public Health are conducting two vaccine studies, these are in Phase I of testing.

Necessity for immediate public health response: Low. Outbreaks will have no impact on patient mortality; however, cases of herpes in the last term of pregnancy may warrant cesarean delivery to avoid transmission of infection from infected mothers to their babies (neonatal infections can be quite severe, including visceral infection, encephalitis and sometimes death). Herpes Simplex is one of the genital ulcer diseases which increases the risk for acquisition of HIV. Next year (1998) Washington State in coordination with SKCDPH will submit to CDC a Enhanced Project aimed at Herpes Simplex, the intervention will include both Clinical and behavioral.

CSTE/CDC recommendation for reporting: This condition is not required to be reported to the CDC, but CDC strongly encourages reporting. Washington sends herpes simplex (initial report only) data without identifiers to the CDC. CSTE does not recommend reporting this condition.

WHO interest: Class 5. For neonatal cases, Class 3B (selectively reportable in recognized endemic areas).

Agricultural impact: None.

Public concern about condition (now and historically): "Americans seriously underestimate their risk for STDs; 77% of women and 72% of men at high risk for STDs surveyed were not concerned about acquiring an STD." (The Hidden Epidemic, Institute of Medicine, 1997, page 118) Washington State residents ordered 46,057 pamphlets on Herpes Simplex, including 15,282 in Spanish in 1996.

Reporters of data: Providers of care are required to report confirmed cases to their local health jurisdiction using a state-approved case report.

Other potential sources of data about the condition: None.

Emergent condition: No.

Public health action: Target educational outreach for adolescents and others at high risk of infection. Work with local health jurisdictions to motivate behavioral change in high-risk populations (e.g. those with repeat infections). Washington is one of very few states actually reporting herpes simplex (initial infection) to the CDC. The CDC has been increasingly interested in our data and in 1998 our CDC-assigned EIS officer at the State Public Health Laboratory will be exploring a descriptive analysis of our herpes data from 1992-1997.

Clinical description: A condition characterized by visible, painful genital or anal lesions.

Laboratory Criteria for Diagnosis:

- Isolation of herpes simplex virus from cervix, urethra, or anogenital lesion, or
- Demonstration of virus by antigen detection technique in Clinical specimens from cervix, urethra, or anogenital lesion, or

- Demonstration of multinucleated giant cells on a Tzanck smear of scrapings from an anogenital lesion

Case classification: Probable: A clinically compatible case (in which primary and secondary syphilis have been excluded by appropriate serologic tests and darkfield microscopy, when available) with either a diagnosis of genital herpes based on Clinical presentation (without laboratory confirmation) or a history of one or more previous episodes of similar genital lesions. **Confirmed:** a clinically compatible case that is laboratory confirmed.

Comment: Genital herpes should be reported only once per patient. The first diagnosis for a patient with no previous diagnosis should be reported.

HUMAN IMMUNODEFICIENCY VIRUS (HIV) INFECTION

Supporting Information to Justify Notification

Incidence: Unknown. In 1995, back-calculation from national AIDS data, using the proportion of United States cases reported from Washington State, yielded an estimate of 550-1,100 new cases annually statewide. Asymptomatic HIV infection became notifiable in 1999 in Washington.

Morbidity: Unknown. Until recently, progression to AIDS and attendant disability was virtually certain. In 1996 (the most recent year in which reporting is considered to be complete), 738 cases of AIDS were reported, for an annual incidence rate of 13.4/100,000. The number of cases reported in 1996 declined 17% from cases reported in 1995, and this trend toward declining morbidity is expected to continue in 1997, based on AIDS cases reported through October. In the last two years, the widespread availability of antiretroviral therapy (ARV) has delayed the progression to AIDS and death among HIV-infected individuals. This new therapy, combined with prophylactic treatments for opportunistic infections and changes in patterns of health care service and utilization, have altered morbidity trends in AIDS in unknown ways. As a result, AIDS case reporting no longer directly reflects underlying trends in HIV infection.

Mortality/case fatality rate: Uncertain. Prior to the advent of ARV, the case fatality rate approached 100%. ARV has been shown to retard the progression of AIDS to death, but the longevity of its therapeutic effects is unknown. The use of antiretrovirals has markedly increased the survival rate of AIDS patients diagnosed since 1995. Of the 426 cases reported in Washington, 1998, 30 were known to have died as of March 1, 1998. National mortality for 1998 from AIDS was 16,516, which marks a decrease of 46.9% from 1997.

Communicability and potential for outbreaks (or impact on others): Exposure to HIV, apart from fetal exposure, occurs only among individuals who undertake high-risk behaviors. Outbreaks depend on high frequency of risk behavior(s) with different people in association with a high prevalence of new infections in needle-sharing or sexual partners, since HIV is most easily transmitted within weeks after infection.

Preventability and treatability: Theoretically, all adult/adolescent infections are preventable if high-risk behaviors are eliminated. Two-thirds of maternal-fetal transmissions may be prevented by administration of AZT to the mother during the prenatal period, during labor, and to the infant postnatally.

Necessity for immediate public health response: None, unless an HIV-infected individual has been judged to be engaging in "behaviors endangering the public."

CSTE/CDC recommendation for reporting: Yes (both)..

WHO interest: Yes, though magnitude of HIV epidemic is far greater in developing countries.

Agricultural impact: None.

Public concern about condition (now and historically): High visibility. HIV infection is a lightning rod for multiple, related issues, often politically sensitive and polarizing, about sexual behavior and education, illegal drug use, confidentiality of medical information, and individual civil liberties.

Other potential sources of data about the condition: Blinded seroprevalence surveys in STD clinics, drug treatment clinics, and other clinic sites (as well as surveys of military recruits and Job Corps applicants) offer insight, but their generalizability is limited. The Seattle-King County Department of Public Health is conducting two seroincidence surveys among IDU, but again, generalizability is limited. Since the demise of the Survey in Childbearing Women, there are no population-based seroprevalence data, and there have never been any population-based HIV incidence data from Washington State. AIDS data are insufficient to monitor HIV infections due to the lag between time of infection and development of AIDS, as well as the impact of ARV and prophylaxis for opportunistic infections.

Emergent condition: No

Public health action: HIV infection reporting would enable public health personnel to offer infected persons voluntary assistance in notifying sex and needle-sharing partners of their exposure to HIV. Since viral load is highest in the first few weeks after infection, recently infected persons may unknowingly propagate HIV infection in the absence of this notification. Partner notification also provides an opportunity for HIV counseling and risk reduction education for individuals who are at demonstrated risk for HIV acquisition. Furthermore, infected individuals could be connected to health education, treatment, and support services which could enable them to avoid or postpone disability and to live longer.

HIV surveillance data would also allow enable public health officials to monitor the scope and progress of the epidemic in order to target community prevention programs to highest risk individuals in highest incidence areas and to predict and plan for public/private costs of HIV care and treatment. The data would inform discussions of mandatory testing of pregnant women, allocation of funding for research and care, and eligibility for Medicaid benefits. The information would allow public health agencies to evaluate the success of partner notification and other HIV prevention programs. In conjunction with AIDS case reporting, HIV infection reporting would allow characterization of seropositive individuals whose infections are not recognized in a timely way (pre-AIDS) and would further enhance targeted prevention programs.

Clinical description:

A. Definitive

1. A positive result on any of the following tests:

    a. Western Blot antibody test
    b. Immunoflourescence antibody test
    c. Test for p24 antigen (neutralizable)
    d. Detection of HIV nucleic acid (RNA or DNA), e.g., by PCR, nucleic acid sequence-based amplification (NASBA) or branched DNA (bDNA) assay.
    e. Virus isolation (culture)

OR...

2. A positive result on a screening test for HIV antibody, e.g., whole viral lysate EIA, or Asimple® or Arapid® test, followed by a positive result on a synthetic peptide EIA antibody test (assuming that the screening test was a different type of test),

OR, if the above criteria are not met...

B. Presumptive

1. A positive result on a screening test for HIV antibody followed by a positive result on a confirmatory/supplemental test for HIV other than those listed above or an unspecified type of test for HIV (assumed not to be the same type of test as the screening test), or
2. The surveillance criteria for a case of acquired immunodeficiency syndrome (AIDS), or
3. A diagnosis of HIV infection documented by a physician.

LEGIONELLOSIS

Supporting Information to Justify Notification

Incidence: In Washington there are typically about 15 cases annually. 15 cases were reported in Washington in 1998 (0.26/100,000). Nationally there were 1,355 cases reported in 1998 (0.51/100,000).

Morbidity: The more severe form of legionellosis, Legionaire's disease, occurs as a pneumonia which may result in respiratory failure. Severe illness is more common among the elderly, those with chronic diseases, smokers, and the immunocompromised.

Mortality/case fatality rate: Although illness can be mild, reported cases are usually hospitalized with a case fatality rate up to 39%. There were two reported fatalities in Washington in 1998.

Communicability and potential for outbreaks (or impact on others): Person-to-person transmission does not occur. Outbreaks are associated with contaminated water sources including hot water systems, air conditioner cooling towers, spas, and ornamental fountains.Cases have occurred in hospitals, on cruise ships, and in the general community.

Preventability and treatability: Preventive measures include disinfecting cooling towers and potable water systems when implicated in outbreaks. Treatment is antibiotics and supportive care as needed.

Necessity for immediate public health response: In the event of an outbreak, the source of exposure should be identified promptly.

CSTE/CDC recommendation for reporting: Reportable to CDC without identifiers and recommended by CSTE.

WHO interest: Class 3B

Agricultural impact: None

Public concern about condition (now and historically): A 1976 outbreak at a Legionnaire's convention in Philadelphia resulted in high public awareness of and concern about this infection. Concern 24 years later is somewhat moderated.

Other potential sources of data about the condition: Hospital discharge data for severe cases, but this cannot be used to identify outbreaks.

Emergent condition: Yes

Public health action: Outbreak investigations are done for clusters in hospitals, institutions, or the community.

Clinical description: An illness with acute onset, commonly characterized by fever, cough, and pneumonia that is confirmed by chest radiograph. Encephalopathy and diarrhea may also occur.

Laboratory criteria for diagnosis:

- Isolation of *Legionella* from lung tissue, respiratory secretions, pleural fluid, blood, or other normally sterile sites, or
- Demonstration of a fourfold or greater rise in the reciprocal immunofluorescence (IF) antibody titer against *Legionella pneumophila* serogroup 1 to greater than or equal to 128, or
- Demonstration of *L. pneumophila* serogroup 1 in lung tissue, respiratory secretions, or pleural fluid by direct fluorescent antibody testing, or
- Demonstration of *L. pneumophila* serogroup 1 antigens in urine by radioimmunoassay

Case classification: Probable: a clinically compatible illness with demonstration of a reciprocal antibody titer greater than or equal to 256 from a single convalescent-phase serum specimen. **Confirmed:** a case that is laboratory confirmed

LEPTOSPIROSIS (Leptospira interrogans various serovars)

Supporting Information to Justify Notification

Incidence: There are 0 to 2 cases reported annually Washington.

Morbidity: Acute –symptoms are commonly fever, headache, chills, and myalgia. Severe cases may have hemolytic complications incluing meningitis, hemolytic anemia, hemorrhage in skin and mucous membranes, hepatorenal failure, and jaundice. Recovery of untreated cases takes several months.

Mortality/case fatality rate: 20% in cases with jaundice and kidney damage if not fully treated.

Communicability and potential for outbreaks (or impact on others): Bacteria are transmitted to humans by ingesting water contaminated by animal urine, by direct animal contact with skin or mucous membranes, or by handling contaminated animal tissues. Reservoir animals include rodents, cattle, pigs, dogs, and raccoons. Leptospirosis may also be transmitted in food (vegetation from contaminated water) and via inhalation or aerosols of contaminated fluids. Rare person-person transmission occurs. Outbreaks linked to contaminated water have been identified.

Preventability and treatability: Avoid consuming potentially contaminated water or raw vegetation from contaminated water, avoid contact with animal urine to eyes or other tissues, and wear protective gear (gloves, boots) when handling contaminated animal tissues. Conduct rodent control. Leptospirosis is treatable with antibiotics and supportive care.
Necessity for immediate public health response: Investigate case to identify additional cases and source of infection.

CSTE/CDC recommendation for reporting: No

WHO interest: Class 2B.

Agricultural impact: Minimal unless a human case is linked to livestock or an agricultural worker is exposed.

Public concern about condition (now and historically): Low, depends on media coverage

Other potential sources of data about the condition: Department of Labor & Industries - occupational exposure cases.
Department of Agriculture, Department of Fish and Wildlife - Animal cases or surveillance data.

Emergent condition: No

Public health action:
Investigate to find additional cases, try to find source of infection - contaminated water. Eliminate source of contamination. Provide education to prevent further cases.

Clinical description: An illness characterized by fever, headache, chills, myalgia, conjunctival suffusion, and less frequently by meningitis, rash, hemolytic anemia, jaundice, or renal insufficiency.

Laboratory criteria for diagnosis:

- Isolation of *Leptospira* from a clinical specimen, or
- Fourfold or greater increase in *Leptospira* agglutination titer between acute- and convalescent-phase serum specimens obtained greater than or equal to 2 weeks apart and studied at the same laboratory, or
- Demonstration of *Leptospira* in a clinical specimen by immunofluorescence

Case classification: Probable: A clinically compatible illness with supportive serology (i.e. a *Leptospira* agglutination titer of greater than or equal to 200 in one or more serum specimens). **Confirmed:** A clinically compatible illness that is laboratory confirmed

LISTERIOSIS (Listeria monocytogenes)

Supporting Information to Justify Notification

Incidence: There were 12 cases (0.2/100,000)in Washington in 1998. There were 11-39 cases/year from 1986-1998.

Morbidity: Although usually a mild illness, listeriosis causes severe infections of the brain and bloodstream in newborns, the elderly, and individuals who are immunosuppressed. Infection during pregnancy may result in miscarriage.

Mortality/case fatality rate: Mortality is 30% or more in high risk groups. There were 3 deaths in Washington in 1998.

Communicability and potential for outbreaks (or impact on others): The bacterium occurs in dust, water, and animals. Outbreaks have been associated with raw milk, raw milk products, meat, including hotdogs and cold cuts, poultry, and delicatessen products.

Preventability and treatability: Proper handling of milk and meat products prevents contamination. Immunocompromised individuals should avoid eating risk foods uncooked.

Necessity for immediate public health response: Outbreak investigations to identify potentially contaminated products.

CSTE/CDC recommendation for reporting: Reporting not CSTE recommended.

WHO interest: Class 4

Agricultural impact: Product recalls.

Public concern about condition (now and historically): Low

Other potential sources of data about the condition: Hospital discharge data. Death certificate data.

Emergent condition: No

Public health action: Outbreak investigation.

Clinical description: Infection caused by *Listeria monocytogenes,* which may produce any of several Clinical syndromes, including miscarriage or stillbirths, listeriosis of the newborn, meningitis, bacteremia, or localized infections.

Laboratory criteria for diagnosis: Isolation of *L. monocytogenes* from a normally sterile site.

Case classification: Confirmed: A clinically compatible illness that is laboratory confirmed.

LYME DISEASE (Borrelia burgdorferi)

Supporting Information to Justify Notification

Incidence: 7-37 cases/year in Washington from 1987-1998. 7 cases in 1998 (0.12/100,000) , about a third of these resulted from out of state exposure. Most cases have been exposed in Western Washington where tick vector is found.

Morbidity: Infection with the spirochete *Borrelia burgdorferi* ranges from asymptomatic to serious systemic infection with chronic complications including arthritis, neurologic changes and cardiac abnormalities. Early signs typically are fatigue, fever, headache, mylagia, and a characteristic skin rash, erythema migrans.

Mortality/case fatality rate: Infection with the spirochete ***Borrelia burgdorferi*** ranges from asymptomatic to serious systemic infection with chronic complications including arthritis, neurologic changes and cardiac abnormalities. Early signs typically are fatigue, fever, headache, mylagia, and a characteristic skin rash, erythema migrans.

Necessity for immediate public health response: Investigate to determine location of exposure, county, tick bite history.

CSTE/CDC recommendation for Reporting: Reportable to CDC and recommended by CSTE.

WHO interest: Class 3B

Agricultural impact: None.

Public concern about condition (now and historically): Low in Washington, although Lyme disease is probably best known of all tickborne diseases. Depends on media coverage.

Other potential sources of data about the condition:

Tick, animal (rodents) surveillance data – Washington State University, United States Army, CDC
Dog cases - veterinarians, veterinary college

Emergent condition: Yes. Most common tickborne disease in the United States, second to relapsing fever in Washington.

Public health action: Investigate case to determine exposure. Tick surveillance to identify species, prevalence of infection in ticks, and tick populations data is needed.

Clinical description: A systemic, tick-borne disease with multiple manifestations, including dermatologic, rheumatologic, neurologic, and cardiac abnormalities. The best clinical marker for the disease is the initial skin lesion, erythema migrans, that occurs among 60%-80% of patients.

- Erythema migrans, or
- At least one late manifestation, as defined below, and laboratory confirmation of infection

Laboratory criteria for diagnosis:

- Isolation of *Borrelia burgdorferi* from Clinical specimen, or
- Demonstration of diagnostic levels of IgM and IgG antibodies to the spirochete in serum or CSF, or
- Significant change in IgM or IgG antibody response to *B. burgdorferi* in paired acute- and convalescent-phase serum samples

Case classification: Confirmed: an illness that meets one of the clinical descriptions above.

Comment: This surveillance clinical description was developed for national reporting of Lyme disease; it is NOT appropriate for clinical diagnosis.
Definition of terms used in the clinical description and clinical description:

A. Erythema migrans (EM)

- For purposes of surveillance, EM is defined as a skin lesion that typically begins as a red macule or papule and expands over a period of days to weeks to form a large round lesion, often with partial central clearing. A solitary lesion must reach at least 5 cm in size. Secondary lesions may also occur. Annular erythematous lesions occurring within several hours of a tick bite represent hypersensitivity reactions and do not qualify as EM. For most patients, the expanding EM lesion is accompanied by other acute symptoms, particularly fatigue, fever, headache, mild stiff neck, arthralgia, or myalgia. These symptoms are typically intermittent. The diagnosis of EM must be made by a physician. Laboratory confirmation is recommended for persons with no known exposure.

B. Late manifestations

Late manifestations include any of the following **when an alternate explanation is not found:**

- Musculoskeletal system

Recurrent, brief attacks (weeks or months) of objective joint swelling in one or a few joints, **sometimes** followed by chronic arthritis in one or a few joints. Manifestations not considered as criteria for diagnosis include chronic progressive arthritis not preceded by brief attacks and chronic symmetrical polyarthritis. Additionally, arthralgia, myalgia, or fibromyalgia syndromes alone are not criteria for musculoskeletal involvement.

- Nervous system

Any of the following, alone or in combination:

Lymphocytic meningitis; cranial neuritis, particularly facial palsy (may be bilateral); radiculoneuropathy; or, rarely, encephalomyelitis. Encephalomyelitis must be confirmed by showing antibody production against *B. burgdorferi* in the cerebrospinal fluid (CSF),

demonstrated by a higher titer of antibody in CSF than in serum. Headache, fatigue, paresthesia, or mild stiff neck alone are not criteria for neurologic involvement.

- Cardiovascular system

Acute onset, high-grade (2nd or 3rd degree) atrioventricular conduction defects that resolve in days to weeks and are sometimes associated with myocarditis. Palpitations, bradycardia, bundle branch block, or myocarditis alone are not criteria for cardiovascular involvement.

C. Exposure

- Exposure is defined as having been in wooded, brushy, or grassy areas (potential tick habitats) in a county in which Lyme disease is endemic no more than 30 days before onset of EM. A history of tick bite is NOT required.

D. Disease endemic to county

- A county in which Lyme disease is endemic is one in which at least two definite cases have been previously acquired or in which a known tick vector has been shown to be infected with *B. burgdorferi*

E. Laboratory confirmation

- As noted above, laboratory confirmation of infection with *B. burgdorferi* is established when a laboratory isolates the spirochete from tissue or body fluid, detects diagnostic levels of IgM or IgG antibodies to the spirochete in serum or CSF, or detects a significant change in antibody levels in paired acute- and convalescent-phase serum samples. States may determine the criteria for laboratory confirmation and diagnostic levels of antibody. Syphilis and other known causes of biologic false-positive serologic test results should be excluded when laboratory confirmation has been based on serologic testing alone.

LYMPHOGRANULOMA VENEREUM

Supporting Information to Justify Notification

Incidence: 1 reported case of LGV in 1996. This condition is extremely rare in Washington. Even though the incidence is quite low, rare disease surveillance is still important in terms of the public's health, as new cases become sentinel health indicators. Some scientists argue that even one case of a rare disease is an epidemic, especially when no cases is the norm. "There is no general rule about the number of cases that must exist for an outbreak to be considered an epidemic. Rather, an epidemic exists whenever the number of cases exceeds that expected on the basis of past experience for a given population (Mausner, JS and Kramer, S, 1985)."

Morbidity: LGV is rare in the United States and causes unilateral lymphadenophathy.

Mortality/Case-fatality rate: Zero.

Communicability and potential for outbreaks (or impact on others): LGV is a fairly common cause of severe proctitis in gay men.

Preventability and treatability: Treatment with ceftriaxone or azithromycin is effective in treating LGV.

Necessity for immediate public health response: High. If an outbreak occurs, traditional control efforts of contact identification and treatment should be intensified.

CSTE/CDC recommendation for reporting: Reportable to CDC without identifiers and recommended by CSTE.

WHO interest: Class 3B

Agricultural impact: None.

Public concern about condition (now and historically): "Americans seriously underestimate their risk for STDs; 77% of women and 72% of men at high risk for STDs surveyed were not concerned about acquiring an STD." (The Hidden Epidemic, Institute of Medicine, 1997, page 118)

Other potential sources of data about the condition: None.

Emergent condition: No.

Public health action: Work with local Disease Intervention Specialists (DIS) to conduct partner notification and assure persons exposed to disease are examined and appropriately treated. Review treatment regimens to assure that adequate medications have been provided to persons diagnosed with disease. Target educational outreach for adolescents and others at high risk of infection. Work with local health jurisdictions to motivate behavioral change in high-risk populations (e.g. those with repeat infections).

Clinical description: Infection with L_1, L_2, or, L_3 serovars of *Chlamydia trachomatis* may result in a disease characterized by genital lesions, suppurative regional lymphadenopathy, or hemorrhagic proctitis. The infection is usually sexually transmitted.

Laboratory criteria for diagnosis:

- Isolation of *C. trachomatis*, serotype L_1, L_2, or L_3, from Clinical specimen, or
- Demonstration of inclusion bodies by immunofluorescence in leukocytes of an inguinal lymph node (bubo) aspirate, or
- Positive microimmunofluorescent serologic test for a lymphogranuloma venereum strain of *C. trachomatis* (in a clinically compatible case)

Case classification: Probable: a clinically compatible case with one or more tender fluctuant inguinal lymph nodes or characteristic proctogenital lesions with supportive laboratory findings of a single *C. trachomatis* complement fixation (CF) titer of greater than 64. **Confirmed:** a case that is laboratory confirmed

MALARIA (*PLASMODIUM* SPECIES)

Supporting Information to Justify Notification

Incidence: In 1998, 30 cases (0.5/100,000) were reported in Washington.

Morbidity: Malaria is a mosquito-borne parasitic infection of the blood causing debilitating illness or even death if untreated. Cases in Washington occur among travelers including military personnel and immigrants. Elsewhere in the US rare cases have occurred near airports, presumably due to unintentionally transported mosquitoes.

Mortality/case fatality rate: Appropriate timely treatment cures malaria. Mortality may be 10% among untreated children or non-immune adults.

Communicability and potential for outbreaks (or impact on others): Absence of the mosquito vector prevents spread of malaria in Washington.

Preventability and treatability: Appropriate timely treatment cures malaria. Those traveling to risk areas should take appropriate chemoprophylaxis beginning before departure.

Necessity for immediate public health response: None

CSTE/CDC recommendation for reporting: Reportable to CDC without identifiers and recommended by CSTE.

WHO interest: Class 3C

Agricultural impact: None

Public concern about condition (now and historically): Travelers with concerns should contact DOH for information.

Other potential sources of data about the condition: None

Emergent condition: Antibiotic resistant strains are emerging.

Public health action: None

Is there a statute that requires reporting of the data? If so please specify. No.

Clinical description: Signs and symptoms are variable, but most patients experience fever. In addition to fever, common associated symptoms include headache, back pain, chills, sweats, myalgias, nausea, vomiting, diarrhea, and cough. Untreated *Plasmodium falciparum* infection may lead to coma, renal failure, pulmonary edema, and death. The diagnosis should be considered for any person who has these symptoms who has traveled to an area with malaria transmission. Asymptomatic parasitemia may occur among persons who have been long-term residents of malaria endemic areas.

Laboratory Criteria for Diagnosis: Demonstration of malaria parasites in blood films

Case Classification: Confirmed: Any person (symptomatic or asymptomatic) who has an episode of microscopically-confirmed malaria parasitemia that occurs in the United States, regardless of whether the person has experienced previous episodes of malaria while outside the country.

Comment: A subsequent attack experienced by the same person but caused by a different Plasmodium species is counted as an additional case. A subsequent attack experienced by the same person and caused by the same species in the United States may indicate a relapsing infection or treatment failure caused by drug resistance.
Blood smears from questionable cases should be referred to the National Malaria Repository, CDC, for confirmation of the diagnosis.
Cases are also classified according to the following World Health Organization categories:
Autochthonous:

- **Indigenous:** malaria acquired by mosquito transmission in an area where malaria is a regular occurrence
- **Introduced:** malaria acquired by mosquito transmission from an imported case in an area where malaria is not a regular occurrence

Imported: malaria acquired outside a specific area (e.g., outside the United States and its territories)
Induced: malaria acquired through artificial means (e.g., blood transfusion, common syringes, or malariotherapy)

Relapsing: renewed manifestation (of Clinical symptoms and/or parasitemia) of malaria infection that is separated from previous manifestations of the same infection by an interval greater than any interval resulting from the normal periodicity of the paroxysms.
Cryptic: an isolated case of malaria not associated with secondary cases, as determined by appropriate epidemiologic investigations.

MEASLES (RUBEOLA)

Supporting Information to Justify Notification

Incidence: The incidence of measles has dropped precipitously in the United States since the licensing of a measles vaccine in 1963. While the 301 cases reported nationally in 1995 was the lowest annual number, outbreaks occur periodically and the total can be much higher in underimmunized populations. Cases in Washington typically occur following exposure to imported cases. In 1996 an outbreak involving 38 cases resulted from an exchange student. A single case was reported in 1998.

Morbidity: Measles is an acute rash illness wth fever and eye, nose, and throat symptoms. Approximately 30% of measles cases have at least one complication. Measles encephalitis resulting in neurological impairment occurs in 5-10/10,000 cases. Pneumonia occurs in 6% of the cases and is the most common cause of death from measles. Seizures occur in 0.6-0.7%.

Mortality/case fatality rate: The rate of fatalities in the United States has been 2-3/1,000 cases in recent years and deaths are most common among young children.

Communicability and potential for outbreaks (or impact on others): Measles is an acute and one of the most highly contagious viral disease with outbreaks occurring every few years, particularly in un- or undervaccinated populations. Transmission is by airborne droplets or direct contact with nasal or throat secretions.

Preventability and treatability: A first dose of measles vaccine produces immunity in 95% of susceptible individuals and a second dose increases this to 99%. Post-exposure vaccination within 72 hours of exposure may provide some protection. Immunoglobulin may also be used for infants under 1 year of age and those at highest risk for complications from the disease.

Necessity for immediate public health response: Reporting of suspected measles cases within 24 hours prompts an immediate public health response of identifying and vaccinating susceptible contacts can limit spread and prevent a widespread outbreak.

CSTE/CDC recommendation for reporting: Reportable to CDC and CSTE recommended.

WHO interest: Class 2A

Agricultural impact: None.

Public concern about condition (now and historically): The public shows moderate concern about measles which may increase in situations where outbreaks occur.

Other potential sources of data about the condition: Hospital discharge data can give information about hospitalized cases but greatly underestimates the number of cases and would not allow monitoring of trends over time or in specific populations. Death certificates can provide information about fatal cases of measles.

Emergent condition: No, measles is a well known disease to public health practitioners.

Public health action: Immediate public health action is taken to serologically confirm suspected cases, to identify contacts and the source of infection and to immunize un- or underimmunized contacts in order to limit spread of the disease. The data are also used to monitor trends in measles outbreaks over time.

Clinical Description: An illness characterized by all of the following Clinical features:

- a generalized rash lasting greater than or equal to 3 days
- a temperature greater than or equal to 38.3°C (101°F)
- cough, or coryza, or conjunctivitis

Laboratory criteria for diagnosis:

- Isolation of measles virus from a Clinical specimen, or
- Significant rise in measles antibody level by any standard serologic assay, or
- Positive serologic test for measles IgM antibody

Case classification:

Suspect: any rash illness with fever
Probable: meets the Clinical Description, has no or noncontributory serologic or virologic testing, and is not epidemiologically linked to a probable or confirmed case
Confirmed: a case that is laboratory confirmed or that meets the Clinical Description and is epidemiologically linked to a confirmed or probable case. A laboratory-confirmed case does not need to meet the Clinical Description.

Comment: Two probable cases that are epidemiologically linked would be considered confirmed, even in the absence of laboratory confirmation. Only confirmed cases should be reported to the NNDSS.

MENINGOCOCCAL DISEASE (Invasive *Neisseria meningitidis*)

Supporting Information to Justify Notification

Incidence: Washington had 77 cases (1.4/100,000) in 1998. Nationally there were 2,725 cases reported (1.01/100,000)

Morbidity: Meningococcal infections of the bloodstream or brain are symptomatic in almost all cases and can result in limb amputation, permanent neurologic damage, or death.

Mortality/case fatality rate: Even with antibiotic treatment, mortality is about 10%. In Washington there were 7 deaths in 1998, Nationally there were 309 deaths reported in 1997.

Communicability and potential for outbreaks (or impact on others): The causative organism is spread person-to-person by respiratory droplets through coughing, sneezing, or sharing items that may have saliva on them.

Preventability and treatability: Antibiotic prophylaxis is recommended for close contacts of cases, such as household members and close friends. Meningococcal infection is treated with antibiotics, typically with hospitalization. In outbreak situations with certain types of the organism, a vaccination program may be appropriate for a defined group such as a school.

Necessity for immediate public health response: Each case of meningococcal infection is investigated to identify contacts in need of antibiotic prophylaxis. Rarely, vaccination is done for a defined group at risk.

CSTE/CDC recommendation for reporting: Reportable to CDC without identifiers and recommended by CSTE.

WHO interest: Class 2A

Agricultural impact: None.

Public concern about condition (now and historically): Outbreaks of meningococcal disease have occurred in communities and on college campuses. In Washington, vaccination programs have been conducted several times in the past decade due to such outbreaks. Public concern is raised when a severe or fatal case is reported in the media.

Other potential sources of data about the condition: Hospital discharge data (retrospective only).

Emergent condition: A new epidemic strain group B ET-5 is present in southwest Washington.

Public health action: Identification of contacts and outbreak investigations are conducted to control the spread of meningococcal disease.

Clinical description: Meningococcal disease presents most commonly as meningitis and/or meningococcemia that may progress rapidly to purpura fulminans, shock, and death. However, other manifestations may be observed.

Laboratory criteria for diagnosis: Isolation of *Neisseria meningitidis* from a normally sterile site

Case classification: Probable: a positive antigen test in cerebrospinal fluid or Clinical purpura fulminans in the absence of a positive blood culture
Confirmed: Confirmed: a clinically compatible illness that is culture confirmed.

Comment: Antigen test results in urine or serum are unreliable for diagnosing meningococcal disease.

MUMPS

Supporting Information to Justify Notification

Incidence: The incidence of mumps in the United States has declined by 95% since the licensing of a live attenuated mumps vaccine in 1967. In 1994, there were 666 cases in the United States. In Washington there were 11 cases (0.2/100,000) of mumps reported in 1998.

Morbidity: The illness involves fever and swelling of one or more salivary glands. Orchitis, usually unilateral, occurs in 20-50% of post-pubertal males and oophoritis in approximately 5% of post-pubertal females. Sterility is a rare sequella. Permanent unilateral deafness occurs in 1/20,000 cases of mumps. Encephalitis occurs in 1-2/10,000 cases and pancreatitis in 4% of cases.

Mortality/case fatality rate: Overall mortality from mumps is approximately 1-3.4/100,000 cases. Nationally, the last reported mumps fatality occurred in 1996.

Communicability and potential for outbreaks (or impact on others): Mumps is highly contagious, although less so than measles or chickenpox, and is spread by droplets and through direct contact with the saliva of an infected person.

Preventability and treatability: Live attenuated mumps vaccine has an efficacy of approximately 95% and protective titers are maintained for at least 10.5 years. Treatment is symptomatic and supportive.

Necessity for immediate public health response: Rapid identification of suspected and confirmed cases is important to the initiation of control measures to prevent spread among susceptible persons.

CSTE/CDC recommendation for reporting: Reportable to CDC and CSTE recommended.

WHO interest: Class 3B

Agricultural impact: None.

Public concern about condition (now and historically):): The public shows moderate concern about mumps but may be overly concerned about the risk of sterility in post-pubertal cases.

Other potential sources of data about the condition: Hospital discharge data can give information about hospitalized cases but greatly underestimates the number of cases and would not allow monitoring of trends over time or in specific populations. Death certificates can provide information about fatal cases of mumps.

Emergent condition: No, mumps is a well known disease to public health practitioners.

Public health action: Rapid public health action is be taken to serologically confirm suspected cases, to identify contacts and the source of infection and to immunize un- or underimmunized contacts in order to limit spread of the disease. The data are also used to monitor trends in mumps outbreaks over time.

Clinical Description: An illness with acute onset of unilateral or bilateral tender, self-limited swelling of the parotid or other salivary gland, lasting greater than or equal to 2 days, and without other apparent cause (as reported by a health professional)

Laboratory criteria for diagnosis:

- Isolation of mumps virus from Clinical specimen, or
- Significant rise in mumps antibody level by any standard serologic assay, or
- Positive serologic test for mumps IgM antibody

Case classification: Probable: meets the Clinical Description, has no or noncontributory serologic or virologic testing, and is not epidemiologically linked to a confirmed or probable case. **Confirmed:** a case that is laboratory confirmed or that meets the Clinical Description and is epidemiologically linked to a confirmed or probable case. A laboratory-confirmed case does not need to meet the Clinical Description.

Comment: Two probable cases that are epidemiologically linked would be considered confirmed, even in the absence of laboratory confirmation.

MARINE BIOTOXIN POISONING: PARALYTIC SHELLFISH POISON & DOMOIC ACID

Supporting Information to Justify Notification

Incidence: **Paralytic Shellfish Poison (PSP)** – 5 confirmed cases in 1998 (0.09/100,000); one confirmed case in 1995; ten confirmed cases in 1978
Domoic Acid - 20+ confirmed cases 1991

Morbidity: **PSP** - facial tingling, loss of motor control, respiratory paralysis, death
Domoic Acid - nausea, vomiting, diarrhea, disorientation, coma, permanent loss of short-term memory, death

Mortality/case fatality rate: **PSP** - unknown
Domoic Acid - 3% in 1987 Prince Edward Island outbreak

Communicability and potential for outbreaks (or impact on others): Universal susceptibility to high levels of either toxin. Limit in shellfish meat is 0.8 ppm for PSP and 20 ppm for domoic acid. Severity of symptoms is proportional to level of toxin in shellfish and amount of shellfish consumed. Severity is inversely proportional to the body size of the consumer.

Preventability and treatability: Prevention depends on monitoring and laboratory testing. Toxins are not detectable by the consumer before symptoms begin. Toxins are not destroyed by cooking shellfish. The only treatment is life support.

Necessity for immediate public health response: High. Monitoring of shellfish is conducted to detect rise of natural biotoxins in shellfish before toxic levels are exceeded. Reports of illnesses indicate a failure of the monitoring program, necessitating emergency public health measures such as recall of shellfish from distribution. Harvesting must be terminated through regulatory closures or public health advisories.

CSTE/CDC recommendation for reporting: None.

WHO interest: None.

Agricultural impact: The shellfish industry is a $50 million industry in Washington. Lack of public confidence in the safety of shellfish could jeopardize sales within Washington, the nation, and the expanding export markets.

Public concern about condition (now and historically): Marine biotoxins are the greatest concern of shellfish safety for consumers. The term known by consumers is “red tide”. However, marine waters are not colored red by the organisms that produce marine biotoxins in the Pacific NW. One of the first recorded deaths of a European in the Pacific NW was a member of Captain Vancouver’s crew in 1793, who died after eating mussels that probably contained PSP.

Other potential sources of data about the condition: Hospital discharge data reports only severe cases of biotoxin poisoning. Hospital discharge data are not timely enough reporting to identify toxic shellfish and prevent consumption.

Emergent condition: Partially. PSP has long been recognized as a biotoxin hazard in Northwest shellfish. Domoic acid was first identified as a biotoxin hazard in the Northwest in 1991.

Public health action: The incidence of illnesses from marine biotoxins are used to adjust regulatory controls for shellfish harvesting and to determine the extent of public health advisories.

Clinical Description:

Laboratory Criteria for Diagnosis:

PERTUSSIS

Supporting Information to Justify Notification

Incidence: The incidence of pertussis in Washington State fluctuates but tends to be several times higher than in the nation as a whole. The 406 cases in Washington for 1998 gave a rate of 7.1/100,000, about three times the national case rate for the same year. A death occurred in Washington each year in 1996 and 1998. During the last seven years, pertussis was the most frequently reported vaccine preventable disease in children less than five years of age.

Morbidity: Pertussis is characterized repeated violent coughs that often become paroxysmal and can result in vomiting. Serious complications are common, particularly among infants <6 months of age and in immunocompromised persons.Approximately 41% of US cases are hospitalized. Neurologic complications such as seizures and encephalopathy may occur as a result of hypoxia from coughing. The incidence of these complications is 1.6% and 0.1% of all cases, respectively, and is a bit higher in infants under months of age.

Mortality/case fatality rate: Overall mortality from pertussis is low, with the case fatality rate in infants under 6 months of age in the US less than 1%.

Communicability and potential for outbreaks (or impact on others): Communicability is high in the early catarrhal stage and gradually wanes over a period of three weeks. Transmitted through direct contact with mucous discharges and through airborne droplets. Outbreaks occur periodically. Secondary attack rates are 70-100% among susceptible household contacts.

Preventability and treatability: Two types of pertussis vaccines (whole-cell and acellular) are available in combination with diphtheria and tetanus toxoids. The efficacy of both is estimated to be greater than 80% in children who have received three doses but immunity begins to wane after 3 years. The use of the acellular form of pertussis vaccine in adolescents and adults is currently under investigation. Antimicrobial treatment may lessen the severity of symptoms and prophylaxis may prevent secondary cases among close contacts.

Necessity for immediate public health response: Medium. Suspected cases should be kept away from young children and infants until they have been treated for at least 5 days with antibiotics.

CSTE/CDC recommendation for reporting: Reportable to CDC.

WHO interest: Class 2B

Agricultural impact: None.

Public concern about condition (now and historically): Medium. Media reports of fatalities increases concern. Media coverage of adverse responses to whole cell DTP has raised some public resistance to the use of the vaccine. It is expected that the recent licensing of acellular DTaP will decrease concern over the use of pertussis vaccine. Historically, pertussis was a major cause of infant mortality prior to immunization.

Other potential sources of data about the condition: Hospital discharge data can give information about hospitalized cases but greatly underestimates the number of cases and would not allow monitoring of trends over time. Death certificates can provide information about fatal cases of pertussis.

Emergent condition: No, this condition is well known to public health practitioners although there has been an increase in the incidence of pertussis nationally and, to an even greater extent, in Washington State.

Public health action: There is increased effort to vaccinate underimmunized populations in areas where outbreaks occur. The data are also used to monitor trends over time and in specific areas of the state.

Clinical Description: A cough illness lasting at least 2 weeks with one of the following: paroxysms of coughing, inspiratory "whoop," or post-tussive vomiting, without other apparent cause (as reported by a health professional)

Laboratory Criteria for Diagnosis: Isolation of *Bordetella pertussis* from Clinical specimen

Case Classification: Probable: meets the Clinical Description, is not laboratory confirmed, and is not epidemiologically linked to a laboratory-confirmed case. **Confirmed:** a case that is either laboratory confirmed or that meets the Clinical Description and is epidemiologically linked to a laboratory-confirmed case. A laboratory confirmed case in a person who has a cough does not need to meet the Clinical Description.

Comment: The Clinical Description above is appropriate for endemic or sporadic cases. In outbreak settings, a case may be defined as a cough illness lasting at least 2 weeks (as reported by a health professional). Because direct fluorescent antibody testing of nasopharyngeal secretions has been demonstrated in some studies to have low sensitivity and variable specificity, such testing should not be relied on as a criterion for laboratory confirmation. Serologic testing for pertussis is available in some areas but is not standardized and, therefore, should not be relied on as a criterion for laboratory confirmation.

Both probable and confirmed cases should be reported nationally.

PESTICIDE POISONING

Supporting Information to Justify Notification

Incidence/Prevalence: 5 year average of 440 incidents/year statewide, involving average 549 individuals/year Based on States with Pesticide Reporting Systems (1994 data) Washington Pesticide Incident Monitoring System (PIMS) records the highest number of incidents per capita. This is because we have the broadest source basis for reporting. There were 365 incident reports in Washington in 1997.

Morbidity: 5 year average of 236 cases/year classified as Definite or Suspect (probable or possible)pesticide related. In 1997, there were 214 such cases in Washington. On the average 14/year alleged pesticide related hospitalizations are investigated. Approximately 1/3 are found to be pesticide related However, based on recent evaluation it is estimated that the completeness of PIMS for hospitalized cases is only 39%. Nationally pesticide cases are thought to be highly underreported.

Mortality/case fatality rate: No known accidental deaths since 1971. Number of deaths from intentional ingestion is unknown.

Communicability and potential for outbreaks (or impact on others):Potential for chemical drift exists. Highest number of individuals in one drift incident was 60 in 1993. Potential for food or water contamination exists: Numerous persons were affected by the aldicarb contamination of Canadian English cucumbers and California watermelons several years ago.

Preventability and treatability: Incident rate can be reduced through education of users and illness is treatable in most instances.

Necessity for immediate public health response: Prompt reporting and investigation of pesticide illnesses is essential for documentation of poisoning, identifying other cases and providing case management support Inability for prompt response also lessens the chance of finding environmental residues necessary for verifying exposure. Requests of health care providers for obtaining direct and indirect biological indicators to verify pesticide poisoning rests upon prompt reporting and investigative practices. It is also intent of the legislature (RCW 70.104) that health care providers report suspected pesticide poisoning immediately to within 7 days depending upon the severity and that the DOH respond promptly

CSTE recommendation for reporting: CSTE recommended in 1996 the addition of pesticide poisoning as a reportable condition to the National Public Health Surveillance System.

WHO Interest: None.

Economic impact: 991 cases of 1,355 cases (1991-1996) classified as Definite, Probably or Possibly pesticide related sought medical assistance (clinic visit, ER visit or hospitalization). In 1995, L&I estimated that of 241 occupational alleged pesticide claims in 1995 medical benefits paid on 134 claims totaled $177,172.

Agricultural impact: Early documentation of incidents and instituting exposure prevention measures could lessen economic loss to the agricultural industry. If sufficient safety problems are associated with a particular pesticide the potential for suspension of use of that product by WSDA or EPA is real. This could result in increased agricultural costs from cost of changing to possibly a more expensive product or even loss of the only tool to control a particular pest.

Public concern about condition (now and historically): Public concern over pesticide drift and DOH inability to adequately respond is what resulted the legislative enhancement of the existing program in 1989 to its current program level. Public perception of the dangers of pesticide exposure is high and especially with regards to childhood exposure

Emergent condition: Pesticide toxicity, per se, is not an emergent condition. However, due to the constant change in specific types of pesticides used, reporting of pesticide incidents is a way to monitor potential emergent problems related to use of new pesticides and new applications for previously used pesticides.

Public health action: Data has been used for support of State and Federal regulatory agencies to suspend use of a product where it was found to be causing adverse health outcomes. Data used by Washington Poison Center. to support changes in management recommendations of childhood rodenticide ingestion. Data provided to counties for LHD County Health Assessments.

Is there a statute that requires reporting of the data? If so please specify. RCW 70.104

Clinical Description: Varies depending on the particular pesticide.

Laboratory Criteria for Diagnosis: Varies depending on the particular pesticide.

Case classification: Confirmed – A person, alive or dead, having been diagnosed as poisoned by any pesticide with the diagnosis based on clinical and/or laboratory evidence. **Suspected** – A person in which the diagnosis is thought more likely than not to be pesticide poisoning.

PLAGUE (Yersinia pestis)

Supporting Information to Justify Notification

Incidence: One human case in Washington (1984) since 1907. Nationally there were 9 cases reported in 1998 (less than 0.01/100,000). In 1997-1998, animal surveillance identified animals infected with plague in Washington.

Morbidity: Initial signs nonspecific and include chills, fever, headache, myalgia . Bubonic form - involves lymph nodes near site of flea bite, pneumonic form involves lungs- person to person transmission. All forms can progress to septicemia form with dissemination throughout body.

Mortality/case fatality rate: 50-60% in untreated cases. Nationally the last 2 deaths were reported in 1996.

Communicability and potential for outbreaks (or impact on others): Bacteria most frequently transmitted via bite of infected rodent flea, also handling tissues of infected animals (rabbits, rodents, carnivores), airborne transmission from the lungs of infected persons and household cats. 1984 Washington case occurred in trapper skinning a bobcat in Yakima County. Usually cases are single but small common source clusters may occur after exposure to wild rodents and their fleas.

Preventability and treatability: Reduce human contact with wild animal reservoirs and their fleas. Provide rodent control to keep rodents out of living environment. Provide flea control for pets. Report mass animal deaths, evaluate for plague presence. Conduct surveillance of potential animal reservoirs. Educate certain occupations at higher risk - veterinarians, trappers. Avoid exposure in recreational settings (camping, hiking). Plague is treatable with antibiotics.

Necessity for immediate public health response: Isolation of patients, disinfection of exudates, discharges. Investigation of case/outbreaks to identify additional cases and determine source of infection.

CSTE/CDC recommendation for reporting: Reportable to CDC and CSTE recommended.

WHO interest: Class 1

Agricultural impact: May be notified of large number of wild animal deaths, or cat case.

Public concern about condition (now and historically): Higher than other diseases historically. Disease name recognition. Depends on case media coverage, press releases, etc.

Other potential sources of data about the condition:
Animal cases - veterinarians, Departments of Agriculture & Fish and Wildlife, hunters, trappers.
Animal surveillance data , deaths, illness- trappers, United States Army, Department of Fish and Wildlife

Emergent condition: No.

Public health action: Investigate cases and outbreaks to identify additional cases and determine source of infection to prevent further cases; isolate patient; establish rodent control; conduct animal surveillance.

Clinical description: A disease characterized by fever and leukocytosis that presents in one or more of the following principal clinical forms:

- Regional lymphadenitis (bubonic plague)
- Septicemia without an evident bubo (septicemic plague)

- Plague pneumonia, resulting from hematogenous spread in bubonic or septicemic cases (secondary plague pneumonia) or inhalation of infectious droplets (primary plague pneumonia)
- Pharyngitis and cervical lymphadenitis resulting from exposure to larger infectious droplets or ingestion of infected tissues (pharyngeal plague)

Plague is transmitted to humans by fleas or by direct exposure to infected tissues or respiratory droplets.

Laboratory criteria for diagnosis:

- Isolation of *Yersinia pestis* from a Clinical specimen, or
- Fourfold or greater change in serum antibody to *Y. pestis*

Case classification: Probable: A clinically compatible illness with supportive laboratory results (demonstration of a single serologic test result suggestive of recent infection with no history of immunization, or demonstration of a Fraction I antigen in blood, bubo aspirate, or tissue by antigen detection -- enzyme-linked immunosorbent assay (ELISA) or fluorescent assay (FA)).
Confirmed: A case that is laboratory confirmed.

POLIOMYELITIS

Supporting Information to Justify Notification

Incidence: Since 1979, there have been no cases of wild polio virus in the United States, but an average of 9 cases of paralytic polio occur annually as a result of oral polio vaccine or, less commonly, from importation from other countries. Nationally there was 1 case of paralytic polio reported in 1998 (less than0.01/100,000).

Morbidity: Acute poliomyelitis begins as a minor, non-specific febrile illness which, in 1-2% of infected persons is followed by aseptic meningitis and in approximately 2% of cases by flaccid paralysis. Bulbar paralysis may compromise respiration and swallowing and the patient may need to be placed on a respiratory support system. If muscle and tendon weakness and paralysis persist longer than one year, the disability will usually be permanent.

Mortality/case fatality rate: 2-5% of paralytic polio cases in children are fatal while 15-30% of adult cases result in death. In bulbar forms of paralytic polio, death occurs in 25-75% of cases. The last nationally reported death occurred in 1996.

Communicability and potential for outbreaks (or impact on others): Poliomyelitis is highly communicable and transmission occurs from person-to person mainly by the fecal-oral route but also by the oral-oral route. Seroconversion rates for susceptible household contacts are 100% for children and 90% for adults.

Preventability and treatability: Two types of polio vaccine are used, an inactivated polio vaccine (IPV) with an efficacy of 95-100% for three doses which is currently recommended in the US or oral polio vaccine (OPV) which is a live attenuated vaccine with efficacy of 90-95% following a series of three doses.. The two types of vaccine may be used in combination. While most cases of polio result in a mild illness, medical management of the more severe paralytic forms, particularly when the respiratory tract is involved, is quite complicated and intense and requires hospitalization.

Necessity for immediate public health response: Immediate public health response is needed to determine if the case is due to wild-type virus and to permit the implementation of rapid control efforts with OPV to limit spread of imported wild poliovirus, prevent additional cases, and maintain the elimination of wild poliovirus from the United States

CSTE/CDC recommendation for reporting: Paralytic polio is reportable to CDC and CSTE recommended.

WHO interest: Class 1A for paralytic polio

Agricultural impact: None.

Public concern about condition (now and historically): Public concern about paralytic polio remains high, particularly among adults who remember the widespread outbreaks in the 1950s.

Other potential sources of data about the condition: Hospital discharge data can give information about hospitalized cases and mortality data from vital records can identify deaths that may be due to paralytic polio.

Emergent condition: No, poliomyelitis is a well known condition to public health practitioners.

Public health action: Data from polio surveillance is used to assess progress toward the international disease eradication goal. It is also used to characterize persons or areas so that additional intervention efforts can be focused to reduce disease incidence and to protect susceptible and high-risk contacts.

Clinical Description: Acute onset of a flaccid paralysis of one or more limbs with decreased or absent tendon reflexes in the affected limbs, without other apparent cause, and without sensory or cognitive loss (as reported by a physician)

Case classification: Probable: a case that meets the Clinical Description. **Confirmed:** a case that meets the Clinical Description and in which the patient has a neurologic deficit 60 days after onset of initial symptoms, has died, or has unknown follow-up status.

Comment: All suspected cases of paralytic poliomyelitis are reviewed by a panel of expert consultants before final classification occurs. Only confirmed cases are included in Table I in the MMWR. Suspected cases are enumerated in a footnote to the MMWR table.

PSITTACOSIS, CHLAMYDIOSIS(*Chlamydia psittaci*)

Supporting Information to Justify Notification

Incidence: In 1998 there were 3 cases reported in Washington. Nationally, there were 47 reported cases in 1998 (0.02/100,000).

Morbidity: Symptoms range from subclinical to severe systemic illness. Infection is usually mild to moderate in severity. Typical symptoms are acute headache, chills, photophobia, cough, myalgia, and fever with possible complications including encephalitis and myocarditis, especially in the elderly. 87% of cases reported in US (1975-1984) for which data were available were hospitalized.

Mortality/case fatality rate: Death is rare.

Communicability and potential for outbreaks (or impact on others): Infection results from inhalation of chlamydia agent in dried bird droppings or secretions. A few cases are seen due to exposure to infected sheep. Person-person transmission is rare. Outbreaks have occurred in petshop employees and in poultry processing plants. Cases are usually sporadic.

Preventability and treatability: Provide education about disease in pet birds and poultry, regulate imported birds, implement bird quarantine measures including antibiotic treatment. Investigate reported avian cases. Treatable with antibiotics.

Necessity for immediate public health response: Investigate human cases to identify other cases and source of infection. Investigate bird cases to prevent additional human cases. Order bird quarantine and disinfection of premises when a source is implicated and trace source of infected birds (petshops, bird dealers).

CSTE/CDC recommendation for reporting: Reportable to CDC and CSTE recommended..

WHO interest: Class 2A

Agricultural impact: source birds may be poultry, threat to Washington poultry industry.

Public concern about condition (now and historically): Moderate, more cases occurred before import restrictions put on birds. Depends on media coverage of cases(s).

Other potential sources of data about the condition:
Bird cases - veterinarians, vet laboratories, citizens, Department of Agriculture, United States Department of Agriculture.

Emergent condition: No, although likely underreported

Public health action: Investigate case/outbreaks to identify additional cases and source of infection. See above.

Clinical description: An illness characterized by fever, chills, headache, photophobia, cough, and myalgia

Laboratory criteria for diagnosis:

- Isolation of Chlamydia psittaci from respiratory secretions, or
- Fourfold or greater increase in antibody against C. psittaci by complement fixation or microimmunofluorescence (MIF) to a reciprocal titer of greater than or equal to 32 between paired acute- and convalescent-phase serum specimens, or
- Presence of immunoglobulin M antibody against C. psittaci by MIF to a reciprocal titer of greater than or equal to 16

Case classification: Probable: a clinically compatible illness that is epidemiologically linked to a confirmed case or that has supportive serology (e.g., C. psittaci titer of greater than or equal to 32 in one or more serum specimens obtained after onset of symptoms)
Confirmed: a clinically compatible case that is laboratory confirmed

Comment: The serologic findings by CF also may occur as a result of infection with Chlamydia pneumoniae or Chlamydia trachomatis. The MIF might be more specific for infection with C. psittaci, but experience with and availability of this newer test are more limited.

Q FEVER(Coxiella burnetti)

Supporting Information to Justify Notification

Incidence: From 1987-1998, 3 cases were reported in Washington.

Morbidity: Infection causes variable severity and duration of illness. Symptoms may be limited to fever or may include headache, weakness, sweats, and involvement of the lungs, liver, or heart. Potential chronic effects –result from endocarditis necessitating heart valve replacement.

Mortality/case fatality rate: 1% in untreated cases, mainly due to endocarditis.

Communicability and potential for outbreaks (or impact on others): Rickettsial organisms are transmitted to humans via dust inhalation in contaminated animal environments, by direct animal contact or exposure to animal tissues (placenta, birth fluid, wool), or by ingesting raw milk. Cases occur due to occupational exposure. Animal reservoirs are sheep, cattle, goats, cats, dogs, ticks, and some wild animals. Person -to-person transmission rarely occurs. Community outbreaks have occurred.

Preventability and treatability: Reduce livestock contact. Disinfect animal environments, especially in occupational settings. Avoid raw milk. Treatable with antibiotics.

Necessity for immediate public health response: Investigation of contacts and source of infection.

CSTE/CDC recommendation for reporting: No.

WHO interest: Class 3B

Agricultural impact: May see occupational exposed cases. Animal source of human cases. Animal asymptotic, shed large nos. of organisms.

Public concern about condition (now and historically): Low

Other potential sources of data about the condition: Occupational cases- Department of Labor & Industries.

Emergent condition: No.

Public health action: Investigate case/outbreak to identify other cases and source of infection. Eliminate source of infection.

Clinical description: Acute illness with fever and various additional symptoms including headache, weakness, and sweats; may be complicated by pneumonitis, hepatitis, or endocarditis.

Laboratory criteria for diagnosis: **(Draft VERSION)**

- Immunofluorescence, complement fixation, microagglutination, or ELISA demonstration of antibody rise in paired sera
- High titer on single serum of antibodies to phase I of the infective organism
- Culture from blood (NOTE: this presents a hazard to laboratory workers)

Case classification: Laboratory confirmed case.

RABIES (ANIMAL and HUMAN, including use of post exposure prophylaxis)
Supporting Information to Justify Notification

Incidence: Although almost eliminated after dog immunization became widespread, rare cases of human still occur due to wild animal rabies. Washington had human rabies cases in 1995 and 1997, the first cases since 1939. Both were due to bat type rabies virus. Of animals tested in Washington, 5-10% of bats tested are positive. The last rabid dog and cat in Washington were in the 1970s. There was one rabid horse and one rabid llama in the 1990s. Approximately 400 animals are tested annually at DOH due to concern about exposure to rabies. It is not known how many potential human exposures occur, as indicated by administration of post-exposure prophylaxis for rabies because of a bite from a rabid animal or from an animal that could not be tested.

Morbidity: Rabies is an acute viral encephalomyelitis, universally fatal in humans. Human cases are rare and isolated in the US. Post-exposure prophylaxis is effective in preventing infection, but may cost $1000.00 or more for an adult.

Mortality/case fatality rate: Rabies is universally fatal.

Communicability and potential for outbreaks: Rabies virus is transmitted via a bite, scratch or possibly saliva contact with mucous membranes or an open wound. Bats are the only reservoir in Washington. with rabid bats found in almost every county. Raccoons, skunks, foxes, coyotes and bats carry rabies in certain regions of the US. Person-to-person has occurred only via corneal transplants.

Preventability and treatability: Avoid contact with bats and wild animals. Report all animal bites for potential rabies exposure evaluation. Vaccinate dogs and cats. Quarantine or test unimmunized dogs, cats, or ferrets that bite a human, test all other animals that bite. Administer post-exposure prophylaxis to exposed persons. Establish animal control measures.

Necessity for immediate public health response: Following a human rabies case evaluate contacts and medical personnel for potential exposure to case. Increase animal surveillance depending on reported animal source. After animal case institute animal control, vaccination, and quarantine as appropriate, and increase animal surveillance depending on the species.

CSTE/CDC recommendation for reporting: Rabies is reportable to CDC and CSTE recommended.

WHO interest: Rabies is Class 2A

Agricultural impact: If livestock were the source of human rabies or livestock rabies cases occurred. Food quality concerns. Vaccination of livestock not currently recommended in Washington.

Public concern about condition (now and historically): Probably never as high as is recently due to two human cases in 3 years, bats in Governor's mansion. Historically higher than other diseases.

Other potential sources of data about the condition:. Animal cases tested at DOH or Seattle-King Co. lab only. Potential cases reported by all above groups and general public, Fish and Wildlife, Department of Agriculture, trappers, hunters, veterinary college, wildlife rehabilitators, and others.

Emergent condition: Yes, almost all human rabies cases in US are now due bat type rabies viruses.

Public health action: Quarantine or test biting animal. Evaluate contacts of a human or animal case. Increase animal surveillance depending on reported animal source. After animal case institute animal control, vaccination, and animal surveillance as appropriate.

Clinical description: Rabies is an acute encephalomyelitis that almost always progresses to coma or death within 10 days of the first symptom.

Rabies, Animal: Laboratory criteria for diagnosis:

- A positive direct fluorescent antibody test (preferably performed on central nervous system tissue)
- Isolation of rabies virus (in cell culture or in a laboratory animal)

Rabies, Human: Laboratory criteria for diagnosis:

- Detection by direct fluorescent antibody of viral antigens in a clinical specimen (preferably the brain or the nerves surrounding hair follicles in the nape of the neck), or
- Isolation (in cell culture or in a laboratory animal) of rabies virus from saliva, cerebrospinal fluid (CSF), or central nervous system tissue, or
- Identification of a rabies-neutralizing antibody titer greater than or equal to 5 (complete neutralization) in the serum or CSF of an unvaccinated person
-

Rabies case classification: Confirmed: a clinically compatible illness that is laboratory confirmed

Rabies Potential Human Exposure case classification: Initiation of post-exposure prophylaxis for rabies prevention

Comment: Laboratory confirmation by all of the above methods is strongly recommended.

RELAPSING FEVER (*Borrelia hermsii*)

Supporting Information to Justify Notification

Incidence: In Washington, cases average 2 to 12 per year with five cases in 1998. All cases were exposed in Eastern Washington or out of state.

Morbidity: High fever, chills, headache, cough, and rash, typically with 1 to 10 relapses of fever.

Mortality/case fatality rate: 2-10% in patients not treated with antibiotics.

Communicability and potential for outbreaks (or impact on others): *Borrelia hermsii* spirochete is transmitted via soft ticks (Ornithodorus)to humans, with no person-to-person transmission. Cases are usually sporadic. Outbreaks have occurred in tick infested structures (cabins).

Preventability and treatability: Use tick control measures, avoid tick infested human habitations, conduct rodent (reservoir) control to decrease risk of tick exposure. Treatable with antibiotics.

Necessity for immediate public health response: Investigate to identify additional cases and source of infection. Recommend rodent control.

CSTE/CDC recommendation for reporting: No.

WHO interest: Class 3B, except louse-borne relapsing fever is Class 1.

Agricultural impact: None.

Public concern about condition (now and historically): Low, depends on media coverage of case

Regional interest in Eastern Washington where cases occur and education/surveillance has been done.

Agricultural impact: None.

Public concern about condition (now and historically): Low, depends on media coverage of case Regional interest in E. Washington where cases occur and education/surveillance has been done.

Other potential sources of data about the condition: Tick surveillance - interest in hospital laboratory but need ticks. No active tick surveillance, collection, testing ongoing.

Emergent condition: Yes, when spread by lice. Otherwise borreliosis is endemic.

Public health action: Investigate to identify additional cases and source of infection.

Clinical description: System illness with one to ten or more fevers lasting 2 to 9 days alternating with afebrile periods, which may be accompanied by chills, headache, and a rash**.**

Laboratory Criteria for Diagnosis:

- Demonstration of spirochetes in darkfield preparations of fresh blood or stained thick or thin blood films, or
- Blood culture in special medium

Case classification: Confirmed: Laboratory diagnosed case.

RUBELLA and CONGENITAL RUBELLA SYNDROME (CRS)

Supporting Information to Justify Notification

Incidence: Since the licensure of a live attenuated rubella vaccine in 1969, the incidence of rubella has dropped 99% in the U.S. from 57,686 cases in 1967 to 371 cases in 1998 (0.13/100,000). In Washington there were 5 cases of rubella reported in 1998, all with out-of-state exposure.

Morbidity: Rubella is usually a mild disease and complications are uncommon but occur more often in adults than in children. Seventy percent of women with rubella experience the occurrence of arthritis or arthralgia . Encephalitis occurs in 1/5,000 cases, more often in adults than children and gastrointestinal, cerebral, or intrarenal hemorrhages occur in 1/3,000 cases but more often in children than in adults. The morbidity of most concern is congenital rubella syndrome (CRS) which results in abortion, miscarriages, stillbirths, and severe birth defects. Approximately 20% of infants born to mothers infected with rubella in the first half of pregnancy are affected. Up to 85% of infants infected in the first three months of pregnancy are affected.

Mortality/case fatality rate: Death from rubella rarely occurs except in rare cases from encephalitis. Fetal death is not uncommon, however, in cases where the mother was infected with rubella in the early part of pregnancy. Rates are difficult to obtain, however, since approximately 30-50% of all rubella infections are sub-clinical. There have been no reported deaths due to rubella reported nationally since 1992.

Communicability and potential for outbreaks (or impact on others): Rubella is only moderately contagious and spread is through droplets from respiratory secretions. Infants with CRS shed large quantities of virus for up to one year and, thus, can transmit rubella to susceptible caregivers.

Preventability and treatability: The use of a live attenuated rubella vaccine, first licensed in 1969, is an effective preventive measure when used in an adult or child over one year of age. Efficacy of the vaccine is approximately 95%. Treatment of postnatal rubella is usually not warranted due to the mild nature of the disease.

Necessity for immediate public health response: Identification of suspected and confirmed cases is important to the initiation of control measures to prevent women from acquiring the disease during pregnancy.

CSTE/CDC recommendation for reporting: Rubella and congenital rubella syndrome are reportable to the CDC and CSTE recommended.

WHO interest: Class 3B

Agricultural impact: None.

Public concern about condition (now and historically): There has traditionally been high public concern about exposure of pregnant women to rubella because of the high risk of CRS. It is now recommended that a woman consider pregnancy termination if she contracts rubella in the early weeks of pregnancy.

Other potential sources of data about the condition: Birth defects registries, schools of the deaf and/or blind, and pediatric specialty clinics caring for children with mental retardation, congenital heart defects, congenital deafness, congenital cataracts, and growth retardation may yield cases of unreported CRS.

Emergent condition: No, rubella and congenital rubella syndrome are a well known conditions to public health practitioners.

Public health action: Rapid public health action is be taken to serologically confirm suspected cases, to identify contacts and the source of infection and to immunize un- or underimmunized contacts in order to limit spread of the disease. The data are also used to monitor trends in rubella outbreaks over time.

Rubella Clinical Description: An illness with all of the following characteristics:

- Acute onset of generalized maculopapular rash
- Temperature greater than 37.2 C (greater than 99 F), if measured
- Arthralgia/arthritis, or lymphadenopathy, or conjunctivitis

Cases meeting the measles Clinical description are excluded. Also excluded are cases with serology compatible with recent measles virus infection.

Laboratory criteria for diagnosis:

- Isolation of rubella virus, or
- Significant rise in rubella antibody level by any standard serologic assay, or
- Positive serologic test for rubella IgM antibody

Case classification: Suspect: any generalized rash illness of acute onset. **Probable:** a case that meets the Clinical Description, has no or noncontributory serologic or virologic testing, and is not epidemiologically linked to a laboratory-confirmed case. **Confirmed:** a case that is laboratory confirmed or that meets the Clinical Description and is epidemiologically linked to a laboratory-confirmed case

Rubella syndrome, Congenital clinical description: An illness of newborns resulting from rubella infection *in utero* and characterized by symptoms from the following categories:

(A) Cataracts/congenital glaucoma, congenital heart disease, loss of hearing, pigmentary retinopathy

Associated symptoms may be:

(B) Purpura, splenomegaly, jaundice, microcephaly, mental retardation, meningoencephalitis, radiolucent bone disease

Clinical Description: Presence of any defects or laboratory data consistent with congenital rubella infection (as reported by a health professional)

Laboratory criteria for diagnosis:

- Isolation of rubella virus, or
- Demonstration of rubella-specific IgM antibody, or
- An infant's rubella antibody level that persists above and beyond that expected from passive transfer of maternal antibody (i.e., rubella HI titer that does not drop at the expected rate of a twofold dilution per month)

Case classification: Possible: a case with some compatible Clinical findings but not meeting the criteria for a compatible case. **Compatible:** a case that is not laboratory confirmed and that has any two complications listed in (A) above, or one complication from (A) and one from (B). **Confirmed:** a clinically compatible case that is laboratory confirmed

Comment: In compatible cases, either or both of the eye-related findings (cataracts and congenital glaucoma) count as a single complication.

SALMONELLOSIS (*Salmonella* species including *S*. Typhi) Including Typhoid and Paratyphoid Fever

Supporting Information to Justify Notification

Incidence: 7 In 1998, 703 cases were reported in Washington (12.4/100,000). Several cases due to *S*. Typhi (typhoid fever) are reported each year in Washington associated with travel or immigration. Nationally there were 44,069 cases of reported salmonellosis, paratyphoid fever and typhoid fever (16.19/100,000).

Morbidity: Typically a severe illness with diarrhea, cramps, bloody diarrhea, and rare complications. Typhoid fever causes sustained fever, headache, malaise, constipation or diarrhea, and nonproductive cough. Severe cases may occur with intestinal hemorrhage. Cases of salmonellosis may be underreported 100 fold. Hospitalization is uncommon but average hospital stay is 7.5 days.

Mortality/case fatality rate: Mortality for salmonellosis is low except for persons in high risk groups. Mortality for typhoid fever is 10% if untreated.

Communicability and potential for outbreaks (or impact on others): Outbreaks of salmonellosis are commonly foodborne but may be due to animal contact. Typhoid fever has humans as its reservoir and is transmitted person-to-person or through contaminated food and water.

Preventability and treatability: Highly preventable by proper food handling and sanitation. Treatment is usually supportive. Antibiotic treatment is given for typhoid fever.

Necessity for immediate public health response: Yes, to prevent further cases/outbreaks. Cases and ill contacts should be excluded from food handling.

Reportable to CDC and CSTE recommended.

WHO interest: Class 2B except typhoid fever which is Class 2A

Agricultural impact: Animal production costs, adverse publicity effects on agriculture. Outbreaks have been associated with poultry, eggs, raw milk, produce, sprouts, unpasteurized juice, and contact with animals including reptiles.

Public concern about condition (now and historically): Very high currently due to large outbreaks and historically, particularly for typhoid fever.

Other potential sources of data about the condition: CDC, FDA, USDA, WHO

Emergent condition: Yes, *S.* Typhimurium DT104 and *S.* enteritidis have increased in various regions of the United States.

Public health action: Investigate all cases and outbreaks, Institute appropriate preventative strategies, inspect food service establishments, educate food service industry. Educate the public/media about prevention strategies.

Salmonellosis Clinical description: An illness of variable severity commonly manifested by fever, diarrhea that may become bloody, abdominal pain, nausea, and sometimes vomiting. Asymptomatic infections may occur, and the organism may cause extraintestinal infections including urinary tract infection, joint infection, or bacteremia.

Laboratory criteria for diagnosis: Isolation of *Salmonella* from a Clinical specimen

Case classification: Probable: a clinically compatible illness that is epidemiologically linked to a confirmed case. **Confirmed:** a case that is laboratory confirmed

Comment: Both probable and confirmed cases are reported to the NNDSS, but only confirmed cases are reported to the laboratory-based surveillance system operated by the Enteric Diseases Branch, Center for Infectious Diseases, CDC. Both asymptomatic infections and infections at sites other than the gastrointestinal tract, if laboratory confirmed, are considered confirmed cases.

Typhoid Fever - Clinical description: An illness caused by Salmonella typhi that is often characterized by insidious onset of sustained fever, headache, malaise, anorexia, relative bradycardia, constipation or diarrhea, and nonproductive cough. However, many mild and atypical infections occur. Carriage of S. typhi may be prolonged.

Laboratory criteria for diagnosis: Isolation of S. typhi from blood, stool, or other clinical specimen

Case classification: Probable: A clinically compatible case that is epidemiologically linked to a confirmed case in an outbreak. **Confirmed:** A clinically compatible case that is laboratory confirmed.

Comment: Isolation of the organism is required for confirmation. Serologic evidence alone is not sufficient for diagnosis. Asymptomatic carriage should not be reported as typhoid fever. Isolates of S. typhi are reported to the Foodborne and Diarrheal Diseases Branch, Division of Bacterial and Mycotic Diseases, National Center for Infectious Diseases, CDC, through the Public Health Laboratory Information System.

SERIOUS ADVERSE REACTIONS TO IMMUNIZATIONS

Supporting Information to Justify Notification

Incidence: Calculation of incidence is limited as vaccine dose distribution data are not readily available. Approximately 10,000 reports of adverse events following immunization are received by VAERS each year. In the state of Washington, a total of 159 adverse events were reported in calendar year 1997. Nationally, there were 11,365 adverse events reported in 1997.

Incidence in the U.S. of vaccine-associated paralytic polio (VAPP) from the administration of oral polio vaccine, from 1980-1994, is approximately 1 per 2.4 million doses distributed.

MMR vaccine may rarely cause thrombocytopenia within 2 months after vaccination (1 case per 30-40,000 vaccinated children).

Morbidity: Adverse events associated with administration of vaccine varies from minor local reactions to systemic reactions. Of the reports received, swelling, redness and/or pain at the injection site (5-30%) and fever (3-5%) are the most common adverse events reported after administration of DTaP and Hib vaccine. Additionally, there is a documented causal relationship between tetanus toxoid and brachial neuritis and Guillain-Barre Syndrome. Fever (5-15%) is the most common adverse event following MMR vaccination. Following hepatitis B vaccination, pain at the site of injection, reported in 13-29% of adults and 3-9% of children is the most common adverse event reported. Also, mild systemic complaints, such as fatigue, headache, and irritability have been reported in 11-17% of adults and 0-20% of children. Vaccine-associated paralytic polio (VAPP) is a rare adverse event following the administration of live oral poliovirus vaccine.

Of the reports received in VAERS between 1991 and 1994, 1.9% reported a permanent disability, 10.7% reported an event that required hospitalization, and 1.9% described the event(s) life-threatening.

Mortality/Case fatality rate: Of the reports received nationally between 1991 and 1994, 2.0% reported death as the outcome. In the state of Washington, no cases of death were reported as a result of vaccine administration in the same time period.

Communicability and potential for outbreaks (or impact on others): Minimal risk of secondary exposure to persons diagnosed with vaccine-associated paralytic polio (VAPP). VAPP individuals shed virus in the stool, and are able to transmit the virus to others for approximately 3-6 weeks after initial exposure.

Preventability and treatability: With the recent changes to the recommended polio immunization schedule (sequential IPV-OPV schedule), there will be a reduction or elimination of viremia that results from OPV. Reducing this viremia from live vaccine-related poliovirus would in turn reduce the risk of VAPP.

Necessity for immediate public health response: Cautionary. An increase in the number of reported events following a certain vaccine during one year does not necessitate causal relationship. Instead, the increase may be a result of increased reporting, increased use of the vaccine, or an actual increase in the rate of events. In addition, quality of information and biased reporting, compounded by drug and disease interaction make attribution of causation difficult.

CSTE/CDC recommendation for reporting: With the enactment of The National Childhood Vaccine Injury Act (NCVIA) of 1986, health care providers who administer vaccines and vaccine manufacturers licensed in the U.S. are required by law to report certain serious adverse events following specific

vaccinations. With the enactment of NCVIA, the Vaccine Adverse Event Reporting System (VAERS), jointly administered by the CDC and FDA, was created in 1990 to provide for the collection of all reports of clinically significant adverse events.

WHO interest: Unknown

Agricultural impact: None.

Public concern about condition (now and historically): Periodically, vaccine safety concerns may emerge in the public eye. To ensure that vaccines are as safe as possible and to maintain public confidence in vaccines, close monitoring of the incidence of adverse events, adequate scientific evaluation of possible associations, and appropriate responses to newly identified risks of vaccines are essential.

Other potential sources of data about the condition: Hospital discharge data can give information about hospitalized cases and mortality data from vital records can identify deaths associated with vaccine related adverse events.

Emergent condition: None

Public Health Action: VAERS reports are usually not helpful in assessing whether vaccine actually caused the reported adverse events because they lack either unique laboratory findings or Clinical syndromes necessary to draw such conclusions. Reports to VAERS are useful for generating hypotheses.

Clinical description: See table at: http://www.fda.gov/cber/vaers/eventtab.htm

Laboratory Criteria for Diagnosis: None.

SHIGELLOSIS (*Shigella* species)

Supporting Information to Justify Notification

Incidence: In 1998, 277 cases (4.9/100,000) in 1998were reported in Washington. Nationally, there were 23,626 reported cases in 1998 (8.74/100,000).

Morbidity: This diarrheal illness can last four to seven days, and in children may be complicated by seizures. There are rare complications including hemolytic uremic syndrome, with kidney failure, and damage to the colon.

Mortality/case fatality rate: Although most cases are mild, with hemolytic uremic syndrome mortality is up to 20%. The last reported fatality occurred in 1996, in Washington. There were 5 reported shigellosis deaths reported nationally in 1997.

Communicability and potential for outbreaks (or impact on others): Transmission is person-to-person, with outbreaks occurring in crowded conditions, day care centers, and institutions, or through ill food handlers.

Preventability and treatability: Sanitation prevents transmission. Rehydration and antibiotics may be needed for severe cases.

Necessity for immediate public health response: Cases and their ill contacts should be excluded from food handling.

CSTE/CDC recommendation for reporting: Reportable to CDC without identifiers and recommended by CSTE.

WHO interest: Class 2B

Agricultural impact: Outbreaks from contaminated produce have occurred.

Public concern about condition (now and historically): Low.

Other potential sources of data about the condition: None.

Emergent condition: No.

Public health action: Investigate all cass and outbreaks,educate of case patient, identify contacts, inspect food service establishments, educate food service industry.

Clinical description: An illness of variable severity characterized by diarrhea, fever, nausea, cramps, and tenesmus. Asymptomatic infections occur.

Laboratory criteria for diagnosis: Isolation of *Shigella* from a Clinical specimen.

Case classification: Probable: A clinically compatible illness that is epidemiologically linked to a confirmed case. **Confirmed:** A case that is laboratory confirmed.

Comment: Both probable and confirmed cases are reported to the NNDSS, but only confirmed cases are reported to the laboratory-based surveillance system operated by the Enteric Diseases Branch, Center for Infectious Diseases, CDC. Confirmation is based on laboratory findings, and Clinical illness is not required.

GROUP A STREPTOCOCCAL DISEASE (INVASIVE)

Supporting Information to Justify Notification

Incidence: Invasive GAS disease has an incidence of 4-6/100,000 nationally. The category includes necrotizing fasciitis and streptococcal toxic shock syndrome (STSS), each approximately 10% of all invasive disease.

Morbidity: Invasive GAS infections may present with any of several clinical syndromes including pneumonia, bacteremia in association with cutaneous infection (cellulitis, erysipelas, or infection of a surgical or nonsurgical wound), deep soft tissue infection (myositis or necrotizing fasciitis), meningitis, peritonitis, osteomyelitis, septic arthritis, postpartum sepsis (puerperal fever), neonatal sepsis, non-focal bacteremia, and toxic shock syndrome.

Mortality/Case fatality rate: Case-fatality is 20% for necrotizing fasciitis, 60% for STSS, and 10-15% for the remainder of invasive GAS disease. An estimated 2,000 to 3,000 deaths occur annually.

Communicability and potential for outbreaks (or impact on others): Transmission is person-to-person through secretions or skin contact. Infection often begins at the site of a break in the skin. There is some evidence that close contacts of a case (family/household members, health care providers) may be at an increased risk for subsequent infection with GAS.

Necessity for immediate public health response: CDC has suggested a reasonable approach is to provide penicillin prophylaxis to close contacts of 1) STSS patients, 2) necrotizing fasciitis patients, or 3) fatal invasive GAS patients. For other cases of invasive GAS disease not in the three listed above, symptomatic contacts should be cultured to identify GAS and should be treated if positive.

CSTE/CDC recommendation for reporting: CSTE recommended

WHO interest: Class 4 for GAS, Class 3B for acute rheumatic fever or STSS.

Agricultural impact: No

Public concern about condition (now and historically): Public concern about necrotizing fasciitis can be tremendous due to media coverage. In the past, concern did not seem to be as prevalent as it has been since the late 1980's.

Other Potential Sources of Data about the Condition: Cases of severe disease prompt some clinicians to notify local health officials despite the lack of reporting requirements.

Public health action: See "Necessity for Immediate Public Health Response" above. Surveillance for invasive GAS and STSS will: help determine the rate and severity of invasive GAS locally and statewide; facilitate identification of clusters leading to investigation; identify and communicate to physicians local changes and severity of infection facilitating improved diagnosis and treatment; and potentially identify cases for prophylaxis of contacts.

Clinical description : Invasive group A streptococcal infections may manifest as any of several clinical syndromes, including pneumonia, bacteremia in association with cutaneous infection (e.g., cellulitis, erysipelas, or infection of a surgical or nonsurgical wound), deep soft-tissue infection (e.g., myositis or necrotizing fasciitis), meningitis, peritonitis, osteomyelitis, septic arthritis, postpartum sepsis (i.e., puerperal fever), neonatal sepsis, and nonfocal bacteremia.
STSS is defined as an illness with the following clinical manifestations occurring within the first 48 hours of hospitalization or, for a nosocomial case, within the first 48 hours of illness:

- Hypotension defined by a systolic blood pressure less than or equal to 90 mm Hg for adults or less than the fifth percentile by age for children aged less than 16 years
- Multi-organ involvement characterized by two or more of the following:
  1.Renal impairment: Creatinine greater than or equal to 2 mg/dL (greater than or equal to 177 umol/L) for adults or greater than or equal to twice the upper limit of normal for age. In patients with preexisting renal disease, a greater than twofold elevation over the baseline level.
  2.Coagulopathy: Platelets less than or equal to 100,000/mm3 (less than or equal to 100 x 106/L) or disseminated intravascular coagulation, defined by prolonged clotting times, low fibrinogen level, and the presence of fibrin degradation products
  3.Liver involvement: Alanine aminotransferase, aspartate aminotransferase, or total bilirubin levels greater than or equal to twice the upper limit of normal for the patient's age. In patients with preexisting liver disease, a greater than twofold increase over the baseline level
  4.Acute respiratory distress syndrome: defined by acute onset of diffuse pulmonary infiltrates and hypoxemia in the absence of cardiac failure or by evidence of diffuse capillary leak manifested by acute onset of generalized edema, or pleural or peritoneal effusions with hypoalbuminemia
  5.A generalized erythematous macular rash that may desquamate
  6.Soft-tissue necrosis, including necrotizing fasciitis or myositis, or gangrene

Laboratory criteria for diagnosis: Isolation of group A Streptococcus (Streptococcus pyogenes) by culture from a normally sterile site (e.g., blood or cerebrospinal fluid, or, less commonly, joint, pleural, or pericardial fluid)

Case classification: **Probable**: Illness clinically compatible with STSS in the absence of another identified etiology for the illness and with isolation of group A Streptococcus from a nonsterile site **Confirmed**: An illness clinically compatible with invasive GAS infection that is laboratory confirmed.

SYPHILIS

Supporting Information to Justify Notification

Incidence: 143 reported cases of early, late, congenital and late latent syphilis in 1998 (2.5 cases per 100,000 persons). Nationally there were 6,993 cases reported in 1998 (14.19/100,000).

Morbidity: Delayed manifestation for congenital syphilis in infants. Syphilis can attack all major organs if untreated, causing damage to the brain and heart and could be fatal.

Mortality/Case-fatality rate: Mortality is rare. Some stillbirths have occurred due to untreated syphilis in the mother. The advent of antibiotics has dramatically reduce the syphilis-associated mortality in the United States and Washington. The last reported syphilis deaths in Washington occurred in 1985. There were 62 reported deaths nationally in 1997.

Communicability and potential for outbreaks (or impact on others): Disease is highly contagious but not communicable in the latent stage. Most persons are symptomatic and usually seek medical care promptly during the primary and secondary stages of the disease. No data available on risk of infection per exposure for heterosexual or homosexual sexual encounters.

Preventability and treatability: Prevention measures include screening, appropriate treatment, and partner management. Long-acting penicillin G (benzathine penicillin), 2.4 million units (m.u.) given in a single IM dose on the day of diagnosis of primary, secondary or early latent syphilis, assures effective therapy even if the patient fails to return. For penicillin-allergic patients, oral doxycycline or tetracycline can be used (14 day regimen). Late stage syphilis may require longer periods of therapy or higher dosage. If treatment taken appropriately, cure should result in 100% of cases.

Necessity for immediate public health response: High. Given the rarity of syphilis in Washington, our "naive" population is particularly vulnerable to an outbreak. The disease has a long incubation period which allows for public health interventions to be successful before disease manifests.

CSTE/CDC recommendation for reporting: Reported to CDC without identifiers and recommended by CSTE.

WHO interest: Class 2A.

Agricultural impact: None.

Public concern about condition (now and historically): "Americans seriously underestimate their risk for STDs; 77% of women and 72% of men at high risk for STDs surveyed were not concerned about acquiring an STD." (The Hidden Epidemic, Institute of Medicine, 1997, page 118)

Reporters of data: Providers of care are required to report confirmed cases to their local health jurisdiction using a state-approved case report.

Other potential sources of data about the condition: Congenital cases may be acquired through CHARS if infant is hospitalized for extensive treatment or complications of infection. Adult early, late, and late

latent cases would only be captured if an outpatient data reporting system was active in Washington; currently, no such system exists.

Emergent condition: Syphilis has been recorded throughout the millennia. Surveillance is still necessary as recent deadlines allow for the possibility of eradication.

Public health action: Work with local Disease Intervention Specialists (DIS) to conduct partner notification and assure persons exposed to disease are examined and appropriately treated. Review treatment regimens to assure that adequate medications have been provided to persons diagnosed with disease. Target educational outreach for adolescents and others at high risk of infection. Work with local health jurisdictions to motivate behavioral change in high-risk populations (e.g. those with repeat infections).

Latent Syphilis Clinical description: A stage of infection due to Treponema pallidum in which organisms persist in the body of the infected person without causing symptoms or signs. Latent syphilis is subdivided into early, late, and unknown syphilis categories based upon the length of elapsed time from initial infection.

Case classification: Presumptive: No Clinical signs or symptoms of syphilis and the presence of one of the following:

- No past diagnosis of syphilis and a reactive nontreponemal test, and a reactive treponemal (fluorescent treponemal antibody-absorbed [FTA-ABS], microhemagglutination assay for antibody to Treponema pallidum [MHA-TP]) test
- A past history of syphilis therapy and a current nontreponemal test titer demonstrating fourfold or greater increase from the last nontreponemal test titer

Early Latent Syphilis Clinical description: A subcategory of latent syphilis. When initial infection has occurred within the previous 12 months, latent syphilis is classified as early.

Case classification: Presumptive: Latent syphilis (see above) of a person who has evidence of having acquired the infection within the previous 12 months based on one or more of the following criteria:

- A nonreactive serologic test for syphilis or a nontreponemal titer that has dropped fourfold within the past 12 months
- A history of symptoms consistent with primary or secondary syphilis without a history of subsequent treatment in the past 12 months
- A history of sexual exposure to a partner with confirmed or presumptive primary or secondary syphilis, or presumptive early latent syphilis, and no history of treatment in the past 12 months
- Reactive nontreponemal and treponemal tests from an individual whose only possible exposure occurred within the preceding 12 months

Late Latent Syphilis Clinical description: A subcategory of latent syphilis. When initial infection has occurred greater than 1 year previously, latent syphilis is classified as late.

Case classification: Presumptive: Latent syphilis (see above) of a patient who shows no evidence of having acquired the disease within the past 12 months (see Error! Bookmark not defined.) and whose age and titer do not meet the criteria specified for unknown latent syphilis.

TETANUS

Supporting Information to Justify Notification

Incidence: No tetanus cases were reported in 1998. There are 0 to 3 cases annually in Washington.

There have been a total of ten cases since 1989. While worldwide incidence is approximately 18/1,000, incidence has been declining in the U.S. since the introduction of tetanus vaccine in the 1940s to approximately 0.02/100,000. There were 101 reported cases nationally in 1998.

Morbidity: At least 80% of reported tetanus cases have generalized with symptoms that include lockjaw (trismus), stiffness of the neck, difficulty in swallowing and rigidity of the abdominal muscles, fever, seizures, elevated blood pressure and episodic heart rate. Muscle spasms lasting several minutes continue for 3-4 weeks. Even with specific treatment, complete recovery takes several months. Severe complications often occur and include laryngospasm, fractures of the spine and/or long bones, hyperactivity of the autonomic nervous system, coma, pulmonary embolism, aspiration pneumonia, and death.

Mortality/case fatality rate: Approximately 30% of cases of generalized tetanus are fatal and, in the U.S., most of these fatalities occur in persons over 50 years of age. In severe tetanus, death can occur in approximately 60% of the cases. There were 4 tetanus deaths reported in the United States in 1997,

Communicability and potential for outbreaks (or impact on others): Transmission is primarily by contaminated wounds, both major and minor, particularly puncture injuries contaminated by dirt. Infection may follow surgery, dental infection, burn wounds, otitis media, animal bites, abortion and pregnancy. Tetanus is not communicable to other persons.

Preventability and treatability: Tetanus toxoid has been produced since 1924. Although no vaccine trials have been done, it is inferred that tetanus toxoid efficacy is virtually 100% for at least 10 years following a properly spaced primary series of three doses. Protective immunity can be maintained by booster doses every 10 years. Treatment of severe tetanus requires intensive medical efforts and initially centers around maintenance of respiration. Control of spasms is also crucial.

Necessity for immediate public health response: Immediate Clinical care of infected persons is the most important concern. A public health response would be indicated in the rare situation of an outbreak as from contaminated drugs.

CSTE/CDC recommendation for reporting: Reportable to CDC and CSTE recommended.

WHO interest: Class 2B

Agricultural impact: None.

Public concern about condition (now and historically): Public concern about tetanus following wounds or other injuries is high.

Other potential sources of data about the condition: Hospital discharge data can give information about hospitalized cases and mortality data from vital records can identify deaths that may be due to tetanus.

Emergent condition: No, tetanus is a well-known condition to public health practitioners.

Public health action: Since tetanus is completely preventable and each instance is a failure to vaccinate, each case is used to identify what factors contribute to this failure and plan what can be done to prevent such cases in the future. Reports of tetanus cases are used to raise awareness of the importance of adult immunization and to characterize persons and areas which should be targeted for increased efforts to raise immunization levels.

Clinical Description: Acute onset of hypertonia and/or painful muscular contractions (usually of the muscles of the jaw and neck) and generalized muscle spasms without other apparent medical cause (as reported by a health professional)

Case classification: Confirmed: a case that meets the Clinical Description

TRICHINOSIS (Trichinella spirallis)

Supporting Information to Justify Notification

Incidence: In Washington, a single case was reported in 1993. Estimated prevalence in U.S. is < 2%. There were 19 reported cases nationally in 1998 (0.01/100,000).

Morbidity: Symptoms due to larvae in muscles can range from minimal to severe muscle soreness, chills, weakness, and hemorrhage to fulminating fatal disease depending on the number of larvae ingested.

Mortality/case fatality rate: Rarely fatal.

Communicability and potential for outbreaks (or impact on others): Intestinal nematodes (roundworm) are transmitted to humans in raw or undercooked meat containing larvae. Most commonly infestation is in skeletal muscle of pork or wild game, particularly carnivore. There is no person-to-person transmission. Cases are usually sporadic or in small localized outbreaks.

Preventability and treatability: Adequate cook or process pork and wild game meats. Require feeding of only cooked garbage to swine. Treatment is with mebendazole, corticosteroids.

Necessity for immediate public health response: Case/outbreak investigation to identify additional cases and source of infection.

CSTE/CDC recommendation for reporting: Reportable to CDC and CSTE recommended.

WHO interest: Class 2B.

Agricultural impact: Although unlikely, impact if infection is linked to commercial product. Presence of larvae in carcass reduces value.

Public concern about condition (now and historically): Historically higher than other foodborne illnesses. Low overall.

Other potential sources of data about the condition: Surveillance data for livestock carcass infestation prevalence is available from US Department of Agriculture.

Emergent condition: No.

Public health action: Case/outbreak investigation to identify additional cases or source of infection. Education/prevention, removal of food source.

Clinical description: A disease caused by ingestion of larvae of *Trichinella spiralis* that has variable Clinical manifestations. Common signs and symptoms among symptomatic persons include eosinophilia, fever, myalgia, and periorbital edema.

Laboratory criteria for diagnosis:

- Demonstration of larvae of cysts of *T. spiralis* on muscle biopsy, or
- Positive serology for *T. spiralis*

Case classification: Confirmed: a clinically compatible illness that is laboratory confirmed

Comment: In an outbreak setting, at least one case must be laboratory confirmed. Associated cases should be reported as confirmed if the patient shared an epidemiologically implicated meal or ate an epidemiologically implicated meat product and has either a positive serology for trichinosis or a clinically compatible illness.

TUBERCULOSIS

Supporting Information to Justify Notification

Incidence: 265 cases of tuberculosis (TB) disease in Washington State in 1998 (4.6 cases per/100,000 persons). There were 18,361 cases reported nationally in 1998.

Morbidity: TB infection progresses to disease when tubercle bacilli overcome the defenses of the immune system and begin to multiply. In the United States, 10% of persons infected with *M. tuberculosis* will develop disease at some point; the remaining 90% will stay infected, but free of disease for the rest of their lives. Infection can progress to disease very quickly or many years after infection. In approximately 5% of persons who have been recently infected, TB disease will develop in the first year or two after infection; in another 5%, disease will develop later in their lives. A number of conditions increase the likelihood that tuberculosis infection will progress to disease. The increased risk ranges from approximately 3 times greater (as with diabetes) to more than 100 times greater (as with HIV infection) for persons who have these conditions.

TB disease affects the lungs (i.e., pulmonary) as well as any other organ (i.e., extrapulmonary). Untreated TB disease can progress to hemoptysis, severe weight loss, and malnutrition; about half the patients will die within a two-year period. A serious outcome of the initial infection is more frequent among infants, adolescents and young adults. Preschool children who go undetected may develop meningeal TB which can result in retardation, paralysis and blindness. Immunocompromised persons (e.g., persons with HIV/AIDS) who are infected with TB, are more likely to have extrapulmonary infection.

Mortality/case fatality rate: Worldwide mortality due to TB is 3 million deaths per year (leading cause of infectious disease death). There were five reported TB deaths in Washington in 1998. Nationally there were 1,166 deaths reported in 1997.

Communicability and potential for outbreaks (or impact on others): Infectiousness of patients who have TB is directly related to the number of tubercle bacilli that they expel into the air. Infectiousness usually declines very rapidly after adequate therapy is started. Infection rates among close contacts of persons with TB disease have been estimated at about 20%.

Preventability and treatability: Preventive therapy with isoniazid substantially reduces the risk that TB infection will progress to disease. The current preventive therapy regimen is 6 to 12 months of daily Isoniazid.

Antimycobacterial therapy renders the patient non-infectious and provides maximum likelihood of cure with the treatment of shortest possible duration. In Washington State, all patients should be started on four drug therapy (i.e., isoniazid, rifampin, pyrazinamide, and ethambutol) unless drug resistance is highly unlikely in that particular case.

Necessity for immediate public health response: High. To limit spread of infection it is important that persons with TB receive appropriate therapy as soon as possible. Effective antimicrobial chemotherapy usually reduces communicability to insignificant levels within days to weeks. To identify additional infections and provide preventive therapy, household members and other close contacts need appropriate evaluation (i.e., skin testing and chest x-rays where appropriate) and treatment.

CSTE/CDC recommendation for reporting: Reportable to CDC and CSTE recommended.

WHO interest: Class 2B.

Agricultural impact: There is no agricultural impact associated with *M. tuberculosis.* (Bovine TB would have an agricultural impact in dairy cows.)

Public concern about condition (now and historically): TB, a disease that at various times in history has been called consumption and even the plague, was one the most common causes of death in the United States until the early 20th century. It continues to be a disease of public concern to this day.

"People should be afraid of this disease" was stated by an individual and recent contact of a case, "but instead they are afraid of me." This statement represents the confusion that persists regarding the differentiation between TB infection and being infectious. Often when an individual is skin test positive the perception of the public is that they are infectious.

The public feels that TB is an issue because of foreign born persons migrating to the United States. In pre-tests given prior to training of medical and public health professionals on TB, a question is asked about the cause of TB in Washington State. The usual responses range from migrant worker to foreign born individuals.

Other potential sources of data about the condition: Although information on TB cases that are hospitalized is available through CHARS, these data do not allow timely intervention and follow-up of cases. Furthermore, they do not provide information on non-hospitalized cases which also need extensive case follow-up (see below " Actions to be taken by public health."

Emergent condition: TB is not emergent. Although multi-drug resistant TB is emerging in the world population (about 50 million people have at least some TB resistance to multiple drugs), Washington State reported only 3 cases of multidrug resistance (i.e., resistance to both Isoniazid and Rifampin) in 1996. In that same year, 31 new Washington State active cases of TB were reported to have resistance to at least one anti-tuberculosis drug.

Public Health Action: Suspect or cases of TB are reported within 24 hours by health care provider to the local health jurisdiction. A case report is initiated and is sent to the State TB program to enter into the CDC information management system (starting 1998: Tuberculosis Information Management System (TIMS). The report of a case results in the following immediate response by public health: confirmation of the case, assurance of appropriate therapy (with directly observed therapy?), isolation of patient while infectious, hospitalization of patients who are homeless where alternative housing is not available, investigation of contacts in order to evaluate other individuals with disease or infection, and provision of prescriptive preventive therapy, where appropriate.

Surveillance of TB also provide data for analyses and description of the TB disease burden in the state including: incidence rates and relative risks for disease, disease distribution in sub-populations, risk factors for disease, longitudinal analysis of tuberculosis over a specified period of time and act as a reference for TB prevention and control activities for WA State counties.

Clinical description: A chronic bacterial infection due to *Mycobacterium tuberculosis*, characterized pathologically by the formation of granulomas. The most common site of infection is the lung, but other organs may be involved.

A case that meets the following criteria:

- A positive tuberculin skin test
- Other signs and symptoms compatible with tuberculosis, such as an abnormal, unstable (worsening or improving) chest x-ray, or Clinical evidence of current disease
- Treatment with two or more antituberculosis medications
- Completed diagnostic evaluation

Laboratory criteria for diagnosis:

- Isolation of *M. tuberculosis* from a Clinical specimen, or
- Demonstration of *M. tuberculosis* from a Clinical specimen by DNA probe or mycolic acid pattern on high-pressure liquid chromatography, or
- Demonstration of acid-fast bacilli in Clinical specimen when a culture has not been or cannot be obtained

Case classification: Confirmed: a case that is laboratory confirmed or, in the absence of laboratory confirmation, a case that meets the Clinical Description

Comment: A case should not be counted twice within any consecutive 12-month period. However, cases in which the patients had verified disease in the past should be reported again if the patients were discharged. Cases also should be reported again if they were lost to supervision for greater than 12 months and disease can be verified again.

Mycobacterial diseases other than those caused by *M. tuberculosis* should not be counted in tuberculosis morbidity statistics unless there is concurrent tuberculosis. But other mycobacterial species suspected of causing disease should be reported.

TULAREMIA (Francisella tularensis)

Supporting Information to Justify Notification

Incidence: In Washington, 1 to 8 cases are reported annually. In 1998, 8 cases of tularemia were reported (0.14/100,000).

Morbidity: Variety of clinical manifestations, most infections are not serious, septicemia and pneumonia forms can be fatal.

Mortality/case fatality rate: 30-60% in untreated septicemic and pneumonia forms.

Communicability and potential for outbreaks (or impact on others): bacterial disease transmitted by bite of ticks or deer flies, ingestion of contaminated water, contact with animal blood or tissues, inhalation of dust, undercooked meats, animal bites. Animal reservoirs are rabbits, hares, muskrats, beavers. No person-person transmission. Usually individual cases, outbreaks are rare.

Preventability and treatability: Avoid ticks and deer flies, drink treated water, fully cook meat from wild animals, use gloves when handling animal tissues, use respiratory protection in dusty environments. Treatable with antibiotics.

Necessity for immediate public health response: Investigate case and contacts to identify source of infection.

CSTE/CDC recommendation for reporting: No

WHO interest: Class 3B

Agricultural impact: No

Public concern about condition (now and historically): Low, depends on case occurrence and media coverage.

Other potential sources of data about the condition: Occupational exposures - Department of Labor and Industries. Others such as Department of Fish and Wildlife or veterinarians may be aware of wildlife deaths due to this disease.

Emergent condition: No

Public health action: Search for source of infection –such as arthropods, animal hosts, water, soil and crops.

Clinical description: An illness characterized by several distinct forms, including:

- Ulceroglandular -- cutaneous ulcer with regional lymphadenopathy
- Glandular -- regional lymphadenopathy with no ulcer
- Oculoglandular -- conjunctivitis with preauricular lymphadenopathy
- Intestinal -- pharyngitis, intestinal pain, vomiting, and diarrhea
- Pneumonic -- primary pleuropulmonary disease
- Typhoidal -- febrile illness without early localizing signs and symptoms

Clinical diagnosis is supported by evidence or history of a tick or deerfly bite, exposure to tissues of a mammalian host of *Francisella tularensis*, or exposure to potentially contaminated water.

Laboratory criteria for diagnosis:

- Isolation of *F. tularensis* from a Clinical specimen, or
- Demonstration of *F. tularensis* in a Clinical specimen by immunofluorescence, or
- Fourfold or greater rise in agglutination titer between acute- and convalescent-phase serum specimens obtained greater than or equal to 2 weeks apart, analyzed at the same time, and in the same laboratory

Case classification: Probable: a clinically compatible illness with supportive serologic results (tularemia agglutination titer of greater than or equal to 160 in one or more serum specimens obtained after onset of symptoms). **Confirmed:** a case that is laboratory confirmed

TYPHUS FEVER

Supporting Information to Justify Notification

Incidence: Typhus is a rickettsial infection with two forms, one carried by lice (*Rickettsia prowazekii*) and one carried by fleas (*Rickettsia typhi*) occurring in Washington only rarely as an imported infection.

Morbidity: Illness has an acute onset with headache, chills, fever, and muscle pains followed by a rash. Symptoms last about two weeks. Louse-borne typhus has become epidemic during wars or other disruptions of populations.

Mortality/case fatality rate: Untreated louse-borne typhus has a mortality rate up to 40%. Flea-borne or murine typhus is milder.

Communicability and potential for outbreaks (or impact on others): Transmission is through the arthropod vectors. There is no person-to-person transmission.

Preventability and treatability: Humans may be the reservoir for louse-borne typhus, and personal hygiene controls the spread of lice and disease. Flea-borne illness is maintained in wild rodent populations with rare transmission to humans. Treatable with antibiotics.

Necessity for immediate public health response: Investigate cases. Rodent control.

CSTE/CDC recommendation for reporting:

WHO interest: Louse-borne typhus is Class 1A.

Agricultural impact: No

Public concern about condition (now and historically): Louse-borne typhus was a major cause of mortality during wars in Europe.

Other potential sources of data about the condition: Hospital data would be too delayed.

Emergent condition: No.

Action(s) to be taken by public health using the data: Investigate cases and outbreaks to identify additional cases and determine source of infection to prevent further cases; isolate patient; establish rodent control.

Clinical description: Acute onset of headache, chills, fever, and muscle pains followed by a rash, with symptoms lasting about two weeks.

Laboratory criteria for diagnosis:

Case classification: Probable:
Confirmed:

VIBRIOSIS

Supporting Information to Justify Notification

Incidence: From 1987-98, the annual number of vibriosis cases in Washington varied from 2 to 57. During 1998, 41cases were reported (0.72/100,000). The *Vibrio* species predominately reported as a cause of illness since 1986 has been V. *parahaemolyticus*. One case of cholera (*V. cholerae* serogroup O1) was reported in 1992, associated with travel to Mexico. No cases of V. vulnificus have been reported in Washington; however the potential exists for illness to be acquired from travel or from seafood brought into Washington from warmer areas.

Morbidity: The symptoms common to infections with *Vibrio* species include diarrhea (usually watery), nausea, and abdominal cramps. Infections with *Vibrio* species may proceed to septicemia and death - rare for *V. parahaemolyticus*. Infections with *V. vulnificus* may include ulcerative wounds caused either by spread of the bacteria through the bloodstream or by skin contact with marine waters.

Mortality/case fatality rate: *V. parahaemolyticus* - <1%
V. vulnificus - 50%
V. cholerae serogroup O1 - 50% untreated, <1% with treatment

Communicability and potential for outbreaks (or impact on others): Susceptibility to gastrointestinal infection is universal. Susceptibility and severity is increased by reduced stomach acid and by underlying health problems, including diabetes, liver damage, and compromised immunity. Illness caused by the marine vibrios (e.g., *V. parahaemolyticus* and *V. vulnificus*) is not transmitted from person to person. Outbreaks occur from consumption of shellfish harvested from areas that have developed high levels of natural marine vibrios during warm months. Illness caused by *V. cholerae* serotype O1 is highly communicable by the fecal oral route and a cholera outbreak could be initiated by a traveler returning from an endemic area.

Preventability and treatability: Education of the public about the hazard of eating raw seafood from warm waters, especially people with underlying medical conditions, is a major preventive measure. If outbreaks are identified promptly, regulatory programs can take contaminated seafood off of the market. Severe illness is treatable with fluid replacement and antibiotics, but the fatality rate remains high for people with underlying medical problems infected with *V. vulnificus*.

Necessity for immediate public health response: Medium to high. Cholera is highly contagious. People ill with cholera must be identified promptly to prevent spread of the disease. Seafood products associated with other vibriosis cases must be taken off of the market immediately to prevent additional infections, especially for people with underlying medical problems.

CSTE/CDC recommendation for reporting: Reporting universally required for cholera; not required for other vibriosis cases. CDC recommends reporting of other vibriosis cases.

WHO interest: Reporting universally required for cholera; not required for other vibriosis cases.

Agricultural impact: The shellfish industry is a $50 million industry in Washington and could be jeopardized by a vibriosis outbreak.

Public concern about condition (now and historically): Cholera has historically been a major concern, but currently is of concern only from imported foods and international travel. Infection with *V. vulnificus* has developed as a concern in the last decade regarding shellfish harvested from warm waters such as the Southeast coast of the United States and the Gulf of Mexico. Infections with *V. parahaemolyticus* occur each summer in the Pacific Northwest, but have not caused public concern until the large outbreak of 1997.

Other potential sources of data about the condition: Hospital discharge data reports only the rare severe cases of vibriosis. Data about contaminated seafood products from other countries and other states may be provided by FDA and CDC.

Emergent condition: Severe cases of infection with *V. vulnificus* have been recognized only in the last decade, partially due to an increasing number of people living with underlying health conditions. Other causes of vibriosis have been recognized for twenty-five years *(V. parahaemolyticus)* and cholera for more than a century *(V. cholerae).*

Public health action: The public can be protected through regulatory actions or public advisories if surveillance data about vibriosis is promptly reported to DOH.

YELLOW FEVER

Supporting Information to Justify Notification

Incidence: The last indigenous case of yellow fever in the United States was in 1996. The last previous case occurred in 1911.

Morbidity: Yellow fever is a viral disease transmitted between humans by a mosquito. Yellow fever is a very rare cause of illness in travelers, but most countries have regulations and requirements for yellow fever vaccination that must be met prior to entering the country. Infection may be mild or involve fever, chills, headache, muscle pain, nausea, vomiting, and hemorrhagic symptoms with liver and kidney failure.

Mortality/case fatality rate: In endemic areas, case-fatality is < 5%.

Communicability and potential for outbreaks (or impact on others): In the absence of the mosquito vector for the yellow fever virus, the disease is not transmitted person-to-person.

Preventability and treatability: General precautions to avoid mosquito bites should be followed. These include the use of insect repellent, protective clothing, and mosquito netting. Yellow fever vaccine is a live virus vaccine which has been used for several decades. A single dose confers immunity lasting 10 years or more. Adults and children over 9 months can take this vaccine. Administration of immune globulin does not interfere with the antibody response to yellow fever vaccine. This vaccine is only administered at designated yellow fever vaccination centers; the locations of which can usually be given by your local health department.

Necessity for immediate public health response: Immunize others traveling with the case.

CSTE/CDC recommendation for reporting: The CDC recommends that this disease be reported nationally.

WHO interest: Class 1A.

Agricultural impact: In South America sporadic infections occur almost exclusively in forestry and agricultural workers from occupational exposure in or near forests.

Public concern about condition (now and historically): Historically yellow fever was endemic and epidemic in most tropical areas. With the development of yellow fever vaccine, incidence has been restricted primarily to Africa and South America. Public concern today is primarily among travelers.

Other potential sources of data about the condition: No timely sources available.

Emergent condition: No.

Public health action: Case investigation, public education, identify other travelers sharing exposure and provide immunization.

Clinical description: A mosquito-borne, viral illness characterized by acute onset and constitutional symptoms followed by a brief remission and a recurrence of fever, hepatitis, albuminuria, and symptoms and, in some cases, liver and renal failure, shock, and generalized hemorrhages

Laboratory criteria for diagnosis:

- Fourfold or greater rise in yellow fever antibody titer with no history of recent yellow fever immunization, and cross-reactions to other flaviviruses ruled out, or
- Demonstration of yellow fever virus, antigen, or genome in tissue, blood, or other body fluid

Case classification: Probable: a clinically compatible illness with supportive serology (stable elevated antibody titer to yellow fever virus, e.g., greater than or equal to 32 by complement fixation, greater than or equal to 256 by immunofluorescence assay, greater than or equal to 320 by hemagglutination inhibition, greater than or equal to 160 by neutralization, or a positive serologic result by IgM-capture enzyme immunoassay. Cross-reactive serologic reactions to other flaviviruses must be ruled out, and there must be no history of yellow fever immunization.) **Confirmed:** a clinically compatible illness that is laboratory confirmed

YERSINIOSIS (Yersinia enterocolitica)

Supporting Information to Justify Notification

Incidence: In 1998 there were 38 cases (0.7/100,000) in Washington

Morbidity: Diarrheal illness with rare complications such as arthritis, skin ulcers, bone infections, or bloodstream infection.

Mortality/case fatality rate: Low.

Communicability and potential for outbreaks (or impact on others): Infection is associated with improperly prepared meats, particularly pork and pork chitterlings, and ill household pets, particularly sick kittens and puppies.

Preventability and treatability: Proper food handling and sanitation prevent transmission. Antibiotic treatment may be appropriate.

Necessity for immediate public health response: Intervention is appropriate in outbreak situations.

CSTE/CDC recommendation for reporting: Reporting not CSTE recommended.

WHO interest: Class 2B.

Agricultural impact: Wild and domestic animals are reservoirs for yersiniosis.

Public concern about condition (now and historically): Low.

Other potential sources of data about the condition: None.

Emergent condition: No.

Public health action: Investigate outbreaks, educate case patients about safe food handling.

Clinical description: An illness of variable severity commonly manifested by fever, diarrhea which may become bloody, enterocolitis, abdominal involvement resembling appendicitis, and in some cases compliated by erythema nodosum, postinfectious arthritis, and systemic infection.

Laboratory criteria for diagnosis: Isolation of *Yersinia enterocolitica* from a clinical specimen

Case classification: Probable: a clinically compatible illness that is epidemiologically linked to a confirmed case. **Confirmed:** a case that is laboratory confirmed

Part II

Diseases and Conditions Proposed for Notification
(Sentinel Reporting)

ANTIBIOTIC RESISTANT DISEASE (Drug Resistant Isolates and Invasive Disease)
Supporting Information to Justify Notification

Type of Sentinel System: Designed to begin monitoring of anti-biotic resistant disease using a sentinel network of cooperating laboratories. Drug resistant *Streptococcus pneumoniae* is an initial condition being developed for implementation.

Incidence: Varies depending on type.

Morbidity: In the United States, disease due to *Streptococcus pneumoniae* accounts for an estimated 6,000 cases of pneumococcal meningitis, 50,000 cases of bacteremia, 500,000 cases of pneumonia, and 7 million cases of otitis media. With the near elimination of the *Haemophilus influenzae* type B by vaccination, pneumococcus has become the number one cause of bacterial meningitis, and remains the number one cause of bacterial pneumonia and bacterial otitis media. Complications of pneumococcal illness can include multi-system organ failure, sepsis, hemolytic uremic syndrome, long-term neurologic sequelae, respiratory failure, and hemorrhagic toxic shock-like illness. The emergence of pneumococcal isolates that are resistant to standard empiric antibiotic therapy has led to changes in national recommendations for treatment of otitis media and meningitis from the American Academy of Pediatrics, the American Association of Family Physicians, and others to prevent increased morbidity from antibiotic-resistant pneumococcus.

Mortality/Case Fatality Rate: Overall, estimated 40,000 deaths annually. Pneumococcal disease accounts for more deaths than any other vaccine-preventable bacterial disease; half of the deaths potentially could be prevented with vaccine. Despite appropriate antimicrobial therapy and intensive medical care, the overall case-fatality rate for pneumococcal bacteremia is 15%-20% in adults; case-fatality for meningitis was 21% in the most recent report from CDC and was higher among the elderly and among those with underlying illness.

Communicability and Potential for Outbreaks (or Impact on Others): *Streptococcus pneumoniae* is carried in the nasopharynx of 15%-20% of people; carriage is highest in young children and increases during the fall and winter months. Clusters of virulent pneumococcal infection appear to have increased in number over the last 20 years. Outbreaks have occurred in institutions (i.e., prisons, long-term care facilities for the elderly and immunosuppressed) and in day care centers where susceptible individuals are grouped. Virulent serotypes that are associated with outbreaks are also the serotypes that have acquired resistance to multiple antibiotics. Outbreak investigations at nursing homes prompted through laboratory-based surveillance for resistant pneumococcus have described attack rates for invasive illness of 16% with mortality of 25%. Use of vaccine at nursing homes is often absent despite current ACIP recommendations.

Necessity for Immediate Public Health Response: There are no recommendations for prophylaxis of contacts to cases of invasive illness. However, clusters of invasive pneumococcal illness however can lead to preventive measures such as vaccination and chemoprophylaxis for susceptible individuals (e.g., nursing home residents or grouped immunosuppressed individuals). Surveillance for antibiotic-resistant pneumococcus can identify groups of individuals or regions of the state where resources can be focused to promote judicious antibiotic use in accordance with CDC recommendations.

CSTE/CDC Recommendation for Reporting: *Streptococcus pneumoniae*, Drug-Resistant, Invasive Disease was designated as a notifiable condition at the national level in 1995.

WHO Interest: Pneumococcal pneumonia is Class 4:
- The World Health Organization currently funds studies evaluating the effectiveness of a new multivalent protein-conjugate pneumococcal vaccine with anticipation of addition of the vaccine to the approved schedule.

- The World Health Organization also monitors pneumococcal disease as part of Acute Respiratory Infections (ARI) Surveillance globally.

Agricultural Impact: Undefined.

Public Concern about Condition (Now and Historically): Complications and prolonged treatment of antibiotic-resistant otitis media is a major concern to parents and health care providers. Meningitis is a major concern of the public and of the news media. Antibiotic resistance has become a major concern for the general public, the news media, and the medical community.

Other Potential Sources of Data about the Condition: Active surveillance is underway for the greater Portland, OR area, and Group Health currently provides isolates to CDC as a member of a sentinel serotype network. Electronic laboratory-based reporting is a potential mechanism for collecting the information which may decrease the burden on laboratories.

Actions to Be Taken by Public Health Using the Data: Immediate-Term: Identification of clusters of invasive pneumococcal illness should prompt public health officials to identify susceptible populations which might benefit from prophylaxis and vaccination.
- Immediate-Term: Clusters of illness due to multiply-resistant pneumococci may prompt changes in empiric therapy for individuals with presumed pneumococcal illness from implicated sources such as prisons, long-term care facilities for elderly or immunosuppressed patients, or day care centers.
- Medium-Term: Incidence of pneumococcal invasive illness, and incidence of antibiotic-resistant pneumococci can help public health officials and health care providers to target resources to ensure vaccination of elderly and at-risk patients and to focus efforts to promote judicious use of antibiotics in accordance with the recommendations of the American Academy of Pediatrics, CDC, American Society of Microbiology, and the Association of State and Territorial Health Officials.
- Long-Term: A new protein-conjugate pneumococcal vaccine will be introduced into the ACIP schedule of vaccines in the next 2-3 years. It is anticipated that the impact on pneumococcal illness will be similar to that seen with *Haemophilus influenzae* type B vaccine where illness and carriage were dramatically reduced. Determination of the burden of illness prior to vaccine introduction and monitoring of the impact of vaccination over time should be performed.

Clinical description: Varies depending on etiology and treatment plan.

Laboratory Criteria for Diagnosis: Varies depending on etiology.

BURNS, OCCUPATIONAL, HOSPITALIZED

Supporting Information to Justify Notification

Type of Sentinel System: Designed to principally work with burn centers, other types of facilities and providers may report. The system will be operated by the Department of Labor & Industries, Safety & Health Assessment & Research for Prevention.

Incidence: Unknown. Colorado, with a workforce about half the size of Washington's, reports about 70 hospitalized, occupational burns annually.

Morbidity: A burn resulting in hospitalization will often have serious sequelae. In Colorado, 32% of hospitalized cases have required a skin graft.

Mortality: Unknown. Based on data from Colorado, 11 % of hospitalized burns patients die. An additional proportion may die of burn injuries prior to hospitalization.

Communicability and Potential for Outbreaks: Clusters can be identified in specific workplaces or types of industries where engineering controls could be directed to prevent future occurrence.

Preventability: These injuries are preventable by implementing engineering controls.

Necessity for Immediate Public Health Response: In most cases, immediate response is critical to allow investigation before the accident scene is altered or destroyed. A serious burn case often indicates an important and remediable hazard that should be corrected before others at the same or similar worksites are injured. These hazards will continue until a public health intervention is made.

CSTE/CDC: The condition is not on the CSTE list. The CDC (NIOSH) has strongly encouraged surveillance of this condition by stating that surveillance is recommended, and funding field-testing of surveillance of this condition.

WHO: No.

Agriculture: No.

Public Perception of Risk: The consequences of serious burns are probably fairly well understood by the general population.

Other sources: No other source can provide complete and rapid information. Hospital Discharge data are not timely enough, and workers' compensation data are incomplete and not timely.

Emergent conditions: Not an "emerging" injury, but surveillance is needed to learn more about how to prevent this condition. It will determine target industries and occupations.

Public health action: The goal of collecting this information is to identify exposures associated with increased risk of burns. These data will be collected, analyzed and results will be disseminated to reduce the incidence of occupational burns. Follow-up with workers/worksites will be attempted. Hazard alerts will be developed and will be distributed to relevant industries and workers. Information from WISHA investigators and consultants will be incorporated into the educational materials. Annual reports will be developed and distributed to the providers and to relevant industry and labor groups. We will collaborate with other states doing surveillance on hospitalized burns. It is possible that information learned will be used to shape occupational health and safety policy.

Clinical description: Any burn, treated at a hospital or burn treatment center caused by an occupational accident.

Laboratory criteria for diagnosis: None.

INFLUENZA PATTERNS

Supporting Information to Justify Notification

Type of Sentinel System: The system includes networks of health care providers in each local health jurisdiction that report influenza trends. Data is then summarized and aggregated at DOH – CD Epidemiology.

Incidence: Estimates are that 10%-20% of the population is infected during most influenza seasons. During the current season 1999-2000, the overall national percentage of respiratory specimens positive for

influenza peaked at 33% during week 51. During the previous 3 years (1996-97, 1997-98, and 1998-99), the peak percentages of respiratory specimens testing positive for influenza viruses ranged from 28% to 34%. For this season, the percentage of overall patient visits for influenza-like illness peaked at 6% during week 52. During the previous 3 years, the peak percentages for such visits ranged between 5% and 7%. During week 4, the proportion of deaths attributed to pneumonia and influenza (P&I) began to decline, from a high of 11.0% during week 3. During the previous 3 years, P&I mortality levels peaked between 8.8% and 9.1%. The current season's P&I figures must be interpreted with caution because important changes have taken place in this year's case definition that may be contributing to higher estimates of P&I mortality than in previous years.

Morbidity: During each influenza season, millions of Americans are affected with influenza and pneumonia. Those at most risk are persons over 65, those suffering with chronic lung or heart disease, and persons with weakened immune systems.

Mortality/ Case-fatality rate: Although the case fatality is low overall, it can be high in high risk groups with other medical conditions. On average approximately 20,000 Americans die from influenza or its complications each influenza season. Among those hospitalized with influenza or its complications, as many as 8% may die. Influenza and pneumonia (combined surveillance) are the fourth leading cause of deaths among all American women and the fifth leading cause of death among all Americans over 65. During 4 epidemics from 1972 through 1992 there were over 40,000 influenza-associated deaths with 80-90% occurring among persons aged greater than 65 years.

Communicability and potential for outbreaks (or impact on others): Highly communicable person-to-person through respiratory secretions. Influenza epidemics and pandemics evolve rapidly. Influenzae outbreaks and mortality can be reduced by achieving high vaccination rates among persons with greatest risk of acquiring disease, especially those immune compromised or living in closed settings (institutions, and chronic care facilities), and among those at risk for complications.

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Preventability: Before each influenza season, vaccinating persons at high risk , their care givers, and their family members, is the most effective measure for reducing influenza morbidity and mortality. Achieving high vaccination rates among high risk groups and among persons living in closed settings (institutions, and chronic care facilities) can reduce the risk for outbreaks. If an outbreak occurs in an institution, chemoprophylaxis or therapy with an influenza-specific antiviral drug can control the spread of the disease.

Necessity for immediate public health response: .Specific antiviral drugs can be given to high-risk individuals when influenza is documented. Influenza vaccine can be given for term protection throughout a single winter season.

CSTE/CDC recommendation for reporting: Outbreaks are reportable to WHO.

WHO interest: Class IA for outbreaks and laboratory confirmed cases**.**

Agricultural impact: None

Public perception of risk: Low during interpandemic years. Very high, when a pandemic occurs.

Other sources of data: None

Emergent condition: If an antigenic shift occurs, this will become a major emerging pathogen.

Public Health Actions: Isolates are used to plan vaccines for subsequent flu seasons. Influenza surveillance is essential for obtaining accurate information to make vaccines used to help in containing influenza epidemics

Clinical description: Influenza, commonly called "the flu," is caused by viruses that infect the respiratory tract. Compared with most other viral respiratory infections, such as the common cold, influenza infection often causes a more severe illness. Typical clinical features of influenza include fever (usually 100F to 103F in adults and often even higher in children) and respiratory symptoms, such as cough, sore throat, runny or stuffy nose, as well as headache, muscle aches, and often extreme fatigue. Although nausea, vomiting, and diarrhea can sometimes accompany influenza infection, especially in children, gastrointestinal symptoms are rarely prominent. The term "stomach flu" is a misnomer that is sometimes used to describe gastrointestinal illnesses caused by other microorganisms.

Laboratory Criteria for Diagnosis: See: http://www.cdc.gov/ncidod/diseases/flu/fluvirus.htm